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FLORULA BOSTONIENSIS.

A

COLLECTION

OF

PLANTS OF BOSTON

AND ITS ENVIRONS,

WITH THEIR GENERIC AND SPECIFIC CHARACTERS, SYNONYMS, DESCRIPTIONS, PLACES OF GROWTH, AND TIME OF FLOWERING,

AND

OCCASIONAL REMARKS.

BY JACOB BIGELOW, M. D.

BOSTON:

PUBLISHED BY CUMMINGS AND HILLIARD, NO. 1, CORNHILL.

Cambridge:::Hilliard & Metcalf, printers.

1814.

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B.14
61, 110
10.23.74

DISTRICT CLERK'S OFFICE.

District of Massachusetts, to wit.

BE it remembered, that on the 21st day of May, 1814, and in the thirty eighth year of the independence of the United States of America, JACOB BIGELOW of the said district has deposited in this office the title of a book, the right whereof he claims as author, in the words following, to wit, "Florula Bostoniensis: A collection of Plants of Boston and its environs, with their generic and specific characters, synonyms, descriptions, places of growth, and time of flowering, and occasional remarks. BY JACOB BIGELOW, M. D."

In conformity to the Act of the Congress of the United States, entitled, "An Act for the encouragement of learning, by securing the copies of maps, charts, and books, to the authors and proprietors of such copies during the times therein mentioned:" and also to an Act entitled, "An Act supplementary to an Act entitled, An Act for the encouragement of learning, by securing the copies of maps, charts, and books, to the authors and proprietors of such copies, during the times therein mentioned; and extending the benefits thereof to the arts of designing, engraving, and etching historical and other prints."

W. S. SHAW, *Clerk of the District of Massachusetts.*

TO THE

TRUSTEES OF THE MASSACHUSETTS SOCIETY

FOR PROMOTING AGRICULTURE,

THIS WORK

IS INSCRIBED,

AS A TESTIMONY OF RESPECT,

BY

THEIR OBEDIENT SERVANT,

THE AUTHOR.

ABBREVIATIONS.

Ait.	Aiton.	*Mill.*	Miller.
Curt.	Curtis.	*Muhl.*	Muhlenburg.
Erh.	Erhart.	*Pers.*	Persoon.
Frœl.	Frœlich.	*Poir.*	Poiret.
Gært.	Gærtner.	*Reich.*	Reichard.
L.	Linnæus.	*Sm.*	Smith.
Lam.	Lamarck	*Sw.*	Swartz.
Lamb.	Lambert.	*Walt.*	Walter.
l' Her.	l' Heritier.	*Wang.*	Wangenheim.
Mich.	Michaux.	*Willd.*	Willdenow.

Mich. f. Michaux the younger.

PREFACE.

During the very flattering attendance which, for the last, and the present season, has been bestowed on the botanical lectures in this place, and the prevailing taste which has been manifested for the study of plants; it was impossible not to feel the great inconvenience arising from the deficiency of botanical books. The common standard works of the science, those containing the genera and species of plants, are hardly so much as heard of by name in our bookstores. These works, even when obtained, being principally in Latin, are useless to a great class of amateurs of the science, who are not conversant in the learned languages. To this it may be added, that a great number of American plants have never been fully described, that all that is known concerning them is contained in the few words of a specific character, which to the student, or inexperienced botanist, can hardly afford a necessary degree of satisfaction and certainty.

I have been influenced by these circumstances in determining to offer to the friends of botany in this section of the country, the present collection of plants, which has been undertaken with the hope

that it may be found to answer some useful purpose as a book of practical reference, until some more extensive work may appear among us.

The plants described in this book have been collected during the two last seasons in the vicinity of Boston, within a circuit of from five to ten miles. These limits have only been exceeded in the case of a few remarkable plants, as Magnolia, Podophyllum, &c. whose places of growth and distance from Boston are distinctly noticed. It is presumed however that the vegetables of this part of the country will serve as a tolerable specimen of the botany of the whole New England states, and particularly of the maritime parts.

No plants have been inserted, which were not found growing spontaneously, or in their wild state. Of these a majority are originally native, the rest have emigrated to us from other countries. Plants which are found growing only in a state of cultivation, are omitted; and among others the numerous cultivated trees and shrubs.

In describing the plants, the genera have been placed at the head of each class, and the species afterward in the same order, with corresponding numbers. On account of the smallness of their number, it has not been thought necessary to repeat the generic characters singly, especially as many of them are given more at large than mere essential characters. In the species I have carefully avoided all changes of names or unnecessary innovations

of any sort. The specific characters have been taken from authors with as much fidelity as was consistent with translation, except where these characters were found to be obviously imperfect. In a few instances characters of superfluous length have been abridged, *(abr.)* and sometimes the terms have been changed for more convenient ones of the same import. *(m. t.)* Occasionally also the character has been taken from a synonym, and marked accordingly. *(sub syn.)*

In some instances it appears probable, and even evident, that different plants have been intended by different authors under the same name. In these cases I have preferred, for the present, not to change the name, but to give it on the authority of that author who has described the plant intended in this work.

The principal synonyms of recent botanists have been given. To each specific character has been added a more full description of the plant taken from actual specimens, together with the place of growth, time of flowering and duration, and occasional remarks on the properties and uses of particular species, collected from authors, or derived from personal observation.

The present work does not profess to contain a *complete* collection of the plants of this section of the country. Such an undertaking, neither my present leisure and opportunities, nor the time allotted for this publication, would permit. I may

perhaps entertain a hope of being able at a future period to atone in some measure for this deficiency. At present I shall be satisfied if the work, now offered to the public, should prove an auxiliary to the study of an interesting science, and be satisfactory to those friends who have obligingly aided me with facilities during its composition. I flatter myself that among its faults, the most numerous will not be its errors; and whatever may be its fate with the public, I shall retain the consciousness, that it has not been the result of superficial inquiry, or negligent observation.

Boston, May, 1814.

FLORULA BOSTONIENSIS.

Class I. MONANDRIA. *One stamen.*

Order I. *MONOGYNIA. One style.*

1. SALICORNIA. Calyx inflated, entire; petals none; stamens one or two; seed one, inclosed in the calyx.

Order II. *DIGYNIA. Two styles.*

2. CALLITRICHE. Calyx none; petals two; seeds four, compressed, naked, with a margin on one side; flowers sometimes monœcious.

MONANDRIA.

MONOGYNIA.

1. SALICORNIA.

SALICORNIA HERBACEA. *Mich. Glass wort, jointed samphire, Pigeons foot.*

Herbaceous, small, erect; spikes linear-oblong; peduncles compressed, widening at top. *Mich.*

A fleshy, branching, leafless plant; not commonly exceeding half a foot in height. Joints of the stem compressed, somewhat four sided. Branches opposite, subdivided, terminating in scaly spikes. It grows in salt marshes and flowers in August and September.—Annual.

The plant here described differs from the European, in having the tops of the joints even and entire, not emarginate; also in the scales of the calyx, which are very acute.

Different species of Salicornia are among the maritime plants employed in the manufacture of Soda. They are used at table as pickles.

DIGYNIA.

2. CALLITRICHE.

CALLITRICHE AQUATICA. *Sm.* *Water starwort.*

Stem floating; upper leaves spatulate, obovate.

Synonym. *CALLITRICHE VERNA. L.*

The leaves are small, opposite, inversely ovate or wedge shaped, rounded at the end, (not acute as in the European;) the upper ones forming star like tufts on the ends of the stem. Flowers minute, axillary, solitary, sessile. It grows in fresh water, supported by its floating upper leaves; flowering above, but ripening its seeds under water.—Found in Roxbury.—Annual.

Class II. DIANDRIA. *Two stamens.*

Order I. *MONOGYNIA. One style.*

A. *Flowers inferior, monopetalous, regular.*

3. LIGUSTRUM. Corolla four cleft; berry two celled, four seeded.

B. *Flowers inferior, monopetalous, irregular, fruit capsular.*

4. VERONICA. Corolla four cleft; rotate, the lowest division narrow; capsule superior two celled.

5. GRATIOLA. Corolla four cleft, two lipped; calyx mostly seven leaved; stamens four, two of them barren; capsule two celled.

6. UTRICULARIA. Corolla ringent, spurred; calyx two leaved; capsule one celled.

C. *Flowers inferior, monopetalous, irregular: seeds naked.*

7. LYCOPUS. Corolla four cleft, nearly equal, one of the divisions notched; stamens distant; seeds. four.

8. MONARDA. Corolla ringent; upper lip linear, involving the filaments; seeds four.

9. CUNILA. Corolla ringent; upper lip flat; stamens four, two of them barren; seeds four.

10. COLLINSONIA. Corolla somewhat ringent; lower lip many cleft, capillary; seed one.

D. *Flowers superior.*

11. CIRCÆA. Calyx two leaved; corolla two petalled; petals inversely heart shaped; capsule two celled; cells one seeded.

Order II. *DIGYNIA. Two styles.*

12. ANTHOXANTHUM. Calyx, glume two valved, one flowered; corolla, glume two valved, awned.

DIANDRIA.

MONOGYNIA.

3. LIGUSTRUM.

LIGUSTRUM VULGARE. *L.* *Privet or Prim.*

Leaves lanceolate, acute; panicle crowded. ***Willd.***

An ornamental shrub with smooth, opposite, spear shaped leaves, thickening at the ends of the branches. Remarkable in summer for its panicles of small white flowers, and in autumn for its conical bunches of black berries. Frequent in woods, and near fences, particularly in Roxbury.—May, June.

4. VERONICA.

VERONICA SERPYLLIFOLIA. *L.* *Smooth Speedwell.*

Raceme terminal, somewhat spiked; leaves ovate somewhat crenate, three nerved, glabrous; capsules obcordate, shorter than the styles. ***Smith.***

A small plant, hardly distinguishable among the grass, except when in flower. Stem decumbent, rooting at the base; leaves opposite, roundish ovate; flowers bluish white with violet stripes; capsules inversely heart shaped.—Pastures and road sides.—May, June.—Perennial.

VERONICA SCUTELLATA. *L.* *Marsh Speedwell.*

Racemes lateral, alternate; partial flower stalks divaricated; leaves linear, slightly indented. ***Sm.***

Stem weak, leaves opposite, linear-lanceolate slightly toothed; racemes axillary, consisting of a few small flowers of a pale flesh colour with purplish stripes. Stalks of the fruit bent backward. Found very common in wet places, varying in size according to the quantity of water, flowering all summer.—Perennial.

5. GRATIOLA.

GRATIOLA AUREA. *Muhl.* *Hedge Hyssop.*

Leaves lanceolate with few teeth; sterile filaments none; capsule nearly equalling the calyx.

Syn. GRATIOLA OFFICINALIS. Mich.

Stem smooth, upright or ascending at base, mostly simple, half a foot high. Leaves opposite, sessile, somewhat clasping, smooth, dotted under a magnifier, oblong-lanceolate, with a slight tooth or two on each side toward the end. Peduncles axillary, alternate, slender. Calyx leaves seven, linear-lanceolate, two of them external. Corolla irregular, yellow, its tube curved, and hairy within. Stamens two inserted in the sides of the corolla. Style long, persistent.—Borders of ponds and muddy places.—September.

6. UTRICULARIA.

UTRICULARIA VULGARIS. *L.* *Bladder wort.*

Nectary conical; scape with few flowers. *L.*

An aquatic plant, appearing above water only with its stalk and flowers. The roots are slightly fixed to the mud at bottom, the rest of the plant floats in the water by means of numerous small air bladders attached to its immersed portions. Flowers yellow.—Ditches and stagnant waters.—June, July.—Perennial.

7. LYCOPUS.

LYCOPUS EUROPÆUS. *L* *Water horehound.*

Lower leaves cut, upper leaves lanceolate, serrate; calyx acuminate-prickly. *Mich.*

Stem square; leaves opposite, lower ones deeply, upper ones more slightly toothed. Flowers in whorls. This plant, as Dr. Smith observes, resembles the mints, but has no aromatic smell.—Wet ground, flowering all summer.—Perennial.

8. MONARDA.

MONARDA ALLOPHYLLA. *Mich.* *Soft Monarda.*

Leaves oblong, sharply serrate; head terminal; calyx bearded at the edge; corollas slender, elongated. *Mich.*

Syn. *MONARDA OBLONGATA.* *Ait.*

Stem square, commonly purple or spotted, two feet high; leaves soft and downy, rounded at base, serrate on the sides, entire towards the point. Petioles and smaller branches downy. Bractes and calyxes ciliate. Flowers, in terminal heads, blue or flesh coloured.—Lynn beach island. Waltham.—July, August. —Perennial.

The taste of the whole plant resembles that of thyme.

9. CUNILA.

CUNILA PULEGIOIDES. *L.* *Pennyroyal.*

Leaves oblong, two toothed; flowers whorled. *L.*

A well known pungent and strong scented plant. Leaves opposite; lanceolate-oval with a few teeth on each side. Flowers in numerous whorls; calyxes with the upper lip ending in three points, the lower in two bristles.

This plant having found its way into England, was described as a new species of mint, under the name of *mentha exigua*, until Dr. Smith detected the error.

In dry grounds.—July, August.—Annual.

10. COLLINSONIA.

COLLINSONIA CANADENSIS. *L.* *Horse weed.*

Leaves heart-ovate; stem smooth; teeth of the calyx subulate, shorter than the tube.

Plant three or four feet high. Leaves opposite, very large serrate and acuminate, the lower ones on long petioles, the upper pair sessile. Panicle terminal, its branches opposite. Flowers dull yellow; lower lip of the corolla fringed. Stamens distant, slender, very long. Style very long; stigma bifid.—Roxbury, road side.—July, August.—Perennial.

11. CIRCÆA.

CIRCÆA LUTETIANA. *L.* *Enchanters nightshade.*

Stem erect; leaves ovate, slightly toothed, opaque, pubescent. *Smith.*

Syn. *CIRCAEA CANADENSIS.* *Muhl.*

Stem round; leaves opposite. Flowers in terminal racemes; petals inversely heart shaped, reddish white; capsules roundish, covered with minute hooks; stalks of the capsules bent backward.—Moist woods, particularly on Lynn beach island.—June, July.—Perennial.

DIGYNIA.

12. ANTHOXANTHUM.

ANTHOXANTHUM ODORATUM. *L.* *Sweet scented vernal grass.*

Spike ovate-oblong; flowers longer than their awns, standing on short stalks. *Smith.*

Stem about a foot high. Leaves short, flat; sheathes somewhat swelling; stipule lanceolate, scarious. Spike terminal, solitary; calyx glumes unequal, rough on the back; corolla shorter than the calyx, awned on the back.

This grass, when partly faded, is exceedingly fragrant, whence its name. It grows on farms where it was formerly introduced from Europe.—May, June.—Perennial.

Class III. TRIANDRIA. *Three stamens.*

Order I. *MONOGYNIA.* *One style.*

A. *Flowers superior.*

13. IRIS. Corolla six parted, the divisions alternately reflected; stigmas petal form.

B. *Flowers inferior.*

14. XYRIS. Corolla three petalled; calyx two valved; capsule three celled.

C. *Flowers grassy.*

15. SCHŒNUS. Corolla none; calyx of fascicled, chaffy scales; seed one, roundish.

16. CYPERUS. Corolla none; calyx of chaffy scales imbricate two ways; seed mostly naked.

17. SCIRPUS. Corolla none; calyx of chaffy scales imbricate every way; stigmas three; seed mostly naked.

18. ERIOPHORUM. Corolla none; calyx of imbricate scales; seed invested with long wooly hair.

19. SPARTINA. Calyx two valved, compressed, one valve larger, longer, and carinated; corolla two valved.

Order II. *DIGYNIA.* *Two styles.*

A. *Flowers scattered, one in each calyx.*

20. PANICUM. Calyx three valved, the third

valve dorsal and very minute; corolla permanent, investing the seed.

21. ALOPECURUS. Calyx two valved, one flowered; corolla one valved; flowers spiked.

22. TRICHODIUM. Calyx two valved, one flowered; corolla one valved, awnless; flowers panicled.

B. *Flowers scattered, several in each calyx.*

23. PHLEUM. Calyx two valved, one flowered, sessile, linear, truncate, ending in a point, inclosing, and longer than the corolla.

24. AGROSTIS. Calyx two valved, one flowered; the valves acute; corolla two valved, unequal, larger than the calyx.

25. LEERSIA. Calyx none; corolla two valved, closed.

26. UNIOLA. Calyx many valved; spikelet ovate, carinate.

27. DACTYLIS. Calyx of two valves, many flowered, one of the valves larger, longer, compressed, carinate.

28. POA. Calyx two valved; spikelet rounded at the base; corolla two valved, the valves ovate, somewhat acute, awnless.

29. BRIZA. Calyx two valved; corolla inflated, its valves heart-shaped, mostly obtuse.

30. FESTUCA. Calyx two valved; spikelet oblong, roundish, with pointed glumes.

31. BROMUS. Calyx two valved; spikelet ob-

long, roundish, two ranked; awn from below the top of the valves.

32. ARUNDO. Calyx two valved; corolla woolly at the base, awnless.

C. *Flowers spiked on a long slender receptacle.*

33. LOLIUM. Calyx one valved, many flowered.

34. TRITICUM. Calyx two valved, many flowered.

35. ELYMUS. Involucre four leaved, two flowered; flower compound.

36. HORDEUM. Involucre six leaved, three flowered; flowers simple.

Order III. *TRIGYNIA. Three styles.*

A. *Flowers inferior.*

37. LECHEA. Corolla three petalled; calyx three leaved; capsule three celled, three valved.

38. MOLLUGO. Corolla none; calyx five leaved; capsule three celled.

B. *Flowers superior.*

39. PROSERPINACA. Corolla none; calyx three parted; seed one, three celled.

TRIANDRIA.

MONOGYNIA.

13. IRIS.

3c IRIS VIRGINICA. *L.* *Virginian Iris.* *Common blue flag or flower de luce.*

Flowers beardless; leaves ensiform; stem acute on one side; segments of the stigma turned backward.

A principal ornament of meadows and wet grounds, its large blue flowers appearing in June. Stem from one to three feet high, compressed, with one side sharper than the other. Leaves sword shaped, a little curved at the point. Germs obtusely three cornered with flat sides. Outer petals revolute, more than twice the size of the inner.—Perennial,

4.c IRIS GRACILIS. *(mihi).* *Boston Iris.*

Iris imberbis; foliis linearibus; caule tereti, plurifloro; germinibus trigonis, lateribus bisulcis.

Flowers beardless; leaves linear; stem round, many flowered; germs triangular, twice grooved on the sides.

Root fleshy, sending out short runners from which new plants arise; stem round, smooth, slender, from one to two feet high, branching at top, bearing several alternate leaves, and from two to eight flowers. Leaves linear, erect, sheathing at their base. Bractes or involucres close, becoming dry. Peduncles flattened on the inside, varying in their proportions to the bractes, but commonly longer. Outer petals slender, spreading, purple at the edge, yellow and veined in the middle, the yellow portion much greater than in the last species. Inner

petals lanceolate, slightly emarginate. Germs oblong, three sided; sides with two deep parallel grooves, the whole representing a cylinder with three smaller ones attached to its sides. As the germ enlarges the distance between the two furrows does not increase, and they are nearly obliterated in the capsule, which is triangular and turgid with its three rows of seeds.

Found at South Boston and Cambridge in the same places with Iris Virginica, but much less frequent.—June.—Perennial.

14. XYRIS.

XYRIS JUPICAI. *Mich.* *Yellow eyed grass.*

Leaves linear, somewhat obtuse; scape near the head dilated, two edged; scales rounded. *Mich. abr.*

Syn. XYRIS CAROLINIANA. Lam. Poir.

Root bulbous; leaves grassy, shorter than the scape; scape erect, two edged, twisted, a little widened at top. Heads roundish, rather acute, supporting a number of small yellow florets projecting out of the scales, hairy within, and consisting of three ovate, crenate petals.—Meadows.—July, August.—Perennial.

15. SCHŒNUS.

SCHOENUS ALBUS. *L.* *White headed bog rush.*

Culm three sided, leafy; flowers fascicled; leaves setaceous.

A smooth, grassy plant, with white heads of flowers. Stem half a foot or more in height, three sided, mostly smooth. Leaves mostly belonging to the stem, alternate, sheathing, the sheaths tubular or entire. Flowers in fascicles on footstalks, terminal and axillary, erect. Glumes white, afterward becoming brownish. Seeds surrounded with short hairs.—In low woods and swamps.—Brighton.—July.—Perennial.

16. CYPERUS.

CYPERUS SPATHACEUS. *L.* ***Sheathed Cyperus.***

Culm round, leafy; leaves alternate, with entire sheaths; racemes axillary and terminal.

Syn. *SCIRPUS SPATHACEUS.* *Mich.*

A tall leafy grass. Stem smooth, hardly three sided, covered with numerous short, flat, smooth, spreading leaves, proceeding from sheaths which are perfectly entire or tubular, the part opposite the leaf ending in a rounded point. The lower leaves, not the sheaths, are deciduous. Racemes mostly axillary. Peduncle compressed, bearing from five to eight alternate, sessile, narrow spikelets of about six flowers. Glumes two ranked. Seeds surrounded with hairs.—Borders of ponds and rivers.—August.—Perennial.

17. SCIRPUS.

SCIRPUS TRIQUETER. *Mich.* ***Triangular club rush.***

Culm leafless, three sided; spikelets lateral, shorter than the point, sessile, conglomerate, oblong-ovate. ***Mich. abr.***

A naked, triangular rush, two or three feet in height. Culm straight, smooth, acute angled and sharp pointed. Spikes few, in a lateral bunch near the top, mostly sessile, crowded, reddish. Glumes carinate pointed, with a dilated, lacerated margin.—Salt marshes.—July, August.—Perennial.

In this variety, the spikes are few in number, mostly sessile, and generally two inches or more below the top of the stem. It corresponds with the figure of Plukenet, but hardly with that of Sowerby.

SCIRPUS MARITIMUS. *L.* *Sea club rush.*

Culm triangular, panicle clustered, leafy, terminal; glumes pointed, torn into three segments. *Sm.*

Syn. *SCIRPUS MACROSTACHYUS. Lam. Muhl.*

Culm erect, smooth, one or two feet high, leafy at base. Leaves linear, acute, rough on the margin. Bractes or floral leaves several, very unequal in length. Panicle resting on these, crowded, consisting of large sessile and pedunculated spikes, ovate, conspicuous by their dull chesnut colour and yellow anthers. The glumes are ovate, shining, slightly carinated, divided into three small segments at tip, the middle one of which is prolonged into a short, setaceous awn.—Salt marshes and ditches.—July.—Perennial.

SCIRPUS RETROFRACTUS. *L.* *Burr rush.*

Culm triangular; umbel simple; spikelets divaricated.

A conspicuous grass in meadows and low grounds. Stem erect, with three acute angles. Leaves smooth, with a rough edge. Floral leaves several, very long, unequal. Rays of the umbel unequal, with terminal spikes. Spikelets numerous, linear-subulate, closely imbricate, sessile, surrounding their common stalk, and inserted nearly at a right angle with it.—July, August.—Perennial.

SCIRPUS ACUTUS. *Muhl.* *Pointed bullrush.*

Culm round, leafless, equal; spikes several, below the top, oblong, somewhat umbelled.

This nearly resembles the large bullrush, (*Scirpus lacustris,*) but differs in its fructification, which is lateral, never terminal. Culm erect, round, smooth, naked, filled with light, spongy pith, often spotted, five or six feet high, uniform in size for the greater part of its length, ending in an acute point.

Spikes several, in a cyme or umbel about an inch below the tip, oblong and closely imbricate. Peduncles smooth, compressed, unequal.—In deep water at Fresh Pond and elsewhere.—June, July.—Perennial.

18. ERIOPHORUM.

ERIOPHORUM ANGUSTIFOLIUM. *Reich.* *Common cotton grass.*

Culm round; leaves channelled, triangular at the tip; spikes several, on flower stalks.

This grass is sufficiently conspicuous by the cotton like tufts, it supports throughout the summer. Stem round, smooth. Leaves a little shorter than the stem, smooth, channelled, terminating in a slender three sided point. Spikes ovate, nodding, on peduncles of different lengths, commonly simple, rarely compound. Glumes brown with a scarious margin. Tufts of hair fine, whitish, of a silken appearance.—Common in meadows.—Perennial.

ERIOPHORUM CYPERINUM. *L.* *Red cotton grass.*

Culm slightly three sided, leafy; panicle more than decompound, proliferous; spikelets numerous.

Syn. *SCIRPUS ERIOPHORUM. Mich.*

A common and very tall meadow grass. Culm erect, firm, smooth, leafy, round, a little compressed on three sides. Panicle umbelled, nodding, terminal, with a large leafy involucre. Peduncles numerous, unequal, rough, supporting other panicles or umbels, with smaller involucres. Spikelets in heads, very numerous, small, ovate, covered with dull reddish wool.—August.—Perennial.

19. SPARTINA.

SPARTINA CYNOSUROIDES. *Muhl.* *Rough grass.*

Spikes numerous, alternate or scattered; pe-

duncles rough; outer valve of the calyx rough with minute teeth on the back.

Syn. DACTYLIS CYNOSUROIDES. *L.*
TRACHYNOTIA CYNOSUROIDES. *Mich.*

Stem three feet high, round and smooth. Leaves very long, smooth, somewhat rough on the margin, the edges convolute when the plant grows near the sea. Spikes numerous, on rough peduncles, given off successively from the three sides of a triangular common stalk. Flowers closely imbricated, in a double row, leaning to one side of their flexuous receptacle. Inner valve of the calyx very small; outer valve much larger, carinated, and rough with minute prickles on the keel.—Marshes.—August.—Perennial.

SPARTINA JUNCEA. *Muhl.* *Short rough grass.*

Spikes from one to three; peduncles smooth; outer valve of the calyx rough with minute teeth on the back; leaves convolute-setaceous.

Syn. TRACHYNOTIA JUNCEA. *Mich.*

A much smaller grass than the preceding, which it resembles in the form of its spikes. Stem round, smooth, about a foot high. Leaves alternate, somewhat two ranked, acquiring when rolled up, a filiform appearance. Spikes about two, on smooth stalks, shorter than in the foregoing species, but similar in shape. Outer valve of the calyx nerved, rough on the keel like the last. Anthers purplish.—Salt marshes.—July.—Perennial.

SPARTINA GLABRA. *Muhl.* *Ditch grass.*

Spikes numerous, sessile, somewhat imbricated; valves of the calyx mostly glabrous.

A large rank grass, common about muddy shores and in salt

water ditches. Stem round, smooth, three or four feet high. Leaves very long, smooth, acute. Spikes ten or a dozen, sessile, lying over each other, with their backs successively applied to the three sides of a long triangular, smooth, common stalk. Flowers closely imbricated, in a double row, leaning outward, as in the former species. Inner valve of the calyx linear. Outer valve many times larger, compressed, and to the naked eye glabrous. Through a glass it is found ciliated on the keel. Anthers straw coloured.—August, September.—Perennial.

DIGYNIA.

20. PANICUM.

PANICUM GLAUCUM. *L.* *Glaucous panic grass.*

Spike oblong, involucres of many bristles, two flowered; glumes bearing the seed, undulate-wrinkled. *Mich. abr.*

Culm round, striated, grooved at top. Leaves flat, rather broad, with striated even sheaths and hairy stipules. Spike cylindrical; flowers commonly in pairs, accompanied by bristles of a yellowish green, rough forward. Corolla, inclosing the seed, transversely corrugated.——About cultivated and low grounds.—July.—Annual.

PANICUM VERTICILLATUM. *L.* *Whorled panic grass.*

Spike whorled; spikelets in fours; involucres of two bristles, rough with reversed teeth, and embracing a single flower. *Sm.*

Culm spreading, rough near the spike. Leaves broad, very rough forward; stipules hairy. Spike single, rather cylindrical, composed of crowded spikelets arranged in whorls. This grass is readily distinguished from the last and from Panicum

viride, by drawing the spike downward through the hand. A rough sensation is felt from the bristles being bearded backward, which is not perceived in the other species which are bearded forward.—Cultivated grounds.—July, August.—Annual.

PANICUM CRUS GALLI. *L.* *Cocks foot panic grass.*

Spike doubly compound, its stalk mostly five angled; spikelets alternate or in pairs, subdivided; calyx bearded, rough. *Sm.*

Readily distinguished from the two last by its large compound spikes, and large leaves. Culm striated, smooth. Leaves broad and long, rough on the margin. Sheaths smooth swelling. Stipules none. Receptacle or spike stalk rough, angular. Calyx ribbed, a little hairy, with short, variable awns.—Rubbish and cultivated grounds.—July, August.—Annual.

PANICUM SANGUINALE. *L.* *Purple panic grass.*

Spikes finger like, their receptacles winged, flexuous, knotted at base; flowers in pairs, awnless.

Syn. *DIGITARIA SANGUINALIS. Mich.*

Known at sight by its radiating, umbelled, or finger like spikes. Culms ascending, rooting from their lower joints. Leaves acute, waved at the edge, a little hairy. Sheaths striated, hairy, sometimes smooth, upper ones longer than their leaves. Spikes diverging from the top of the culm at one or more points; their receptacle compressed, serpentine, with spikelets of two and sometimes of three or four flowers in its depressions.—Cultivated grounds.—July, August.—Annual.

PANICUM CAPILLARE. *L.* *Hairy panic grass.*

Sheaths very hairy; panicle capillary, branching, decompound, lax; flowers minute, all pedicel-

led, solitary, oblong-ovate, acuminate, awnless. ***Mich.***

A tall, branching grass, the culm, leaves, and especially the sheaths covered with thick, rigid, horizontal hairs. Panicle often a foot long and nearly as wide, its branches long, straight, stiff, slender, given off at right angles, knotted at the base. Peduncles capillary, supporting solitary, scattered, naked flowers. —Frequent in corn fields, &c. flowering about July.—Annual.

PANICUM LATIFOLIUM. *L.* ***Broad leaved panic grass.***

Leaves ovate-lanceolate, clasping; sheaths hairy at the neck; panicle with lateral racemes.

Distinguished from most other grasses around it by its very broad leaves. Culm smooth, giving out branches from its joints. Leaves wide, rough at the edge, acuminate, clasping the stem, hairy where they unite with their sheaths. Panicle of small or middling size, with its branches mostly simple, the lower ones sometimes compound. Glumes ovate, striate, awnless.—Woods. —May, June.—Perennial.

21. ALOPECURUS.

ALOPECURUS GENICULATUS. *L.* ***Floating Foxtail grass.***

Culm ascending, bent at the joints; spike somewhat compound, cylindrical; glumes obtuse, hairy. ***Sm.***

Stems of various lengths, ascending, forming knees or angles at the joints, and rooting from the lower ones, when the plants grow in the water. Leaves rather smooth and short, their sheaths a little swelling. Spike cylindrical, obtuse, divisible into lobes. Glumes of the calyx obtuse, fringed with long hairs. Corolla awned at base.—Ponds and ditches.—July. —Perennial.

22. PHLEUM.

PHLEUM PRATENSE. *L.* *Herds gruss or cat's tail grass.*

Spike cylindrical, very long; glumes fringed at the back, longer than the awns. *Sm.*

Culm upright, round, smooth. Leaves flat, pointed, rough on the upper side; sheaths long, striated; stipules blunt. Spike long, cylindrical, upright. Calyx of two glumes fringed with hairs on the back, square or truncated at the end, with two short awns.—June, July.—Perennial.

This grass is extensively cultivated, forming a chief constituent of what is with us called English hay. It is usually denominated *herds grass*, and sometimes improperly *fox tail grass*. In England it is known by the name of *cat's tail*, and *Timothy grass*, the last burlesque appellation derived from Mr. Timothy Hanson, one of its early propagators. It is said to have fallen there into disrepute, although its reputation is good in this country. Professor Martyn and Mr. Curtis speak of it as a harsh, coarse grass, in all respects inferior to the true foxtail grass, (Alopecurus pratensis.)

23. AGROSTIS.

AGROSTIS VULGARIS. *With.* *Red top. Fine bent grass.*

Panicle spreading with divaricated, capillary branches; calyx valves equal; inner petal obtuse, half as long as the other. *Sm.*

A pretty common grass in dry mowing land and pastures, usually entering into the composition of our English hay. Stem erect, smooth, slender, leafy. Leaves narrow, acute, with long sheaths. Panicle erect, red, its branches very numerous and fine, arranged in half whorls, flexuous and variously divided. Flowers numerous and very small. Calyx valves lanceolate, acute, spreading, purple at base, scarious on the mar-

gin. Inner valves of the corolla half as long as the outer.—June, July.—Perennial.

AGROTIS ALBA. *L.*

Panicle loose; culm creeping; calyx valves equal, lanceolate, polished, rough on the keel. ***Sm.***

Stems spreading, ascending, rooting at the lower joints. Leaves rough, their sheaths smooth. Panicle loose, consisting of somewhat distant half whorls, its branches much subdivided and roughish. Flowers lanceolate, shining, white or purplish brown. Valves of the calyx equal, acute, rough on the back only.—Meadows.—June, July.—Perennial.

24. TRICHODIUM.

TRICHODIUM LAXIFLORUM. *Mich.* *Thin grass.*

Culms erect, leaves narrow, short; sheaths somewhat rough. ***Pers.***

This grass is readily known by its very thin, spreading, capillary panicle. Stem erect, smooth, slender. Leaves short, glabrous, on roughish sheaths. Panicle consisting of very long, straight, rough branches, of a purplish colour, hardly larger than hairs, and very flexible. These are given off in half whorls, and are repeatedly subdivided into three or four branchlets at a time. Flowers minute, scattered at the ends of the branches. Glumes lanceolate, acute.—Road sides.—July.—Perennial.

25. LEERSIA.

LEERSIA ORYZOIDES. *Swartz.* *Cut grass.*

Panicle loose; spikelets triandrous; keel of the glumes ciliate. ***Sw.***

Syn. PHALARIS ORYZOIDES. *L.*

Stem about two feet in height. Leaves rough, narrow, on long rough sheaths. Panicle erect, spreading, with slender, rough branches. Flowers very distinguishable by their oval figure and white colour. Glumes of the corolla compressed, the two valves shut together, so as to assume an elliptical form, with the curvature on one side greatest. Keel of the valves ciliated, giving the circumference of the flower a fringed appearance.—Wet places.—August.—Perennial.

26. UNIOLA.

UNIOLA SPICATA. *L.* *Spike grass.*

Somewhat spiked; leaves involute, rigid. *L.*

A common grass of the salt marshes. Stem a foot high, round, smooth. Leaves of the stem numerous, short, smooth, increasing in frequency upward, the upper ones hardly an inch apart, rolled up so as to acquire a setaceous form, commonly investing, and often overtopping the spike. Spike irregular, about an inch long, consisting of ten or a dozen small, compressed, crowded spikelets. Glumes flattened, sharp on the back.—July.—Perennial.

27. DACTYLIS.

DACTYLIS GLOMERATA. *L.* *Orchard grass.*

Panicle crowded, leaning one way. *Sm.*

Root perennial. Culms round, rough toward the top. Leaves very rough. Stipules cloven or torn. Panicle of flowers consisting of close bunches on rough and rigid peduncles; leaning toward one side. Calyx pubescent and rough, the inner valve twice as large as the outer, and shortly awned.—June.—Perennial.

A coarse, but extremely hardy and productive grass, said to be much more luxuriant here than in Europe.—By fences, thickets, &c.—June, July.

28. POA.

POA PRATENSIS. *L.* *Common spear grass.*

Panicle spreading; spikelets of four flowers; glumes lanceolate, five nerved, connected by a web; stipule short and blunt. *Sm.*

Spear grass or meadow grass is found in all situations, constituting a considerable portion of the common turf in pastures, road sides, &c. Culms leafy, slender, smooth, often stoloniferous. Leaves spreading, blunt, with obtuse or truncated stipules. Panicle large, loose, of horizontal fine branches, bearing many ovate spikelets of about four flowers.—June.—Perennial.

This is an excellent and useful grass.

POA COMPRESSA. *L.* *Blue grass.*

Panicle condensed, its branches leaning one way; erect, before and after flowering. Culm ascending, compressed. *Sm.*

Root creeping. Stem decumbent at base, erect above, very much compressed, whence the name. Leaves commonly glaucous, narrow, with long sheaths. Panicle erect, crowded, tending to one side, obtuse; its branches short and rough, appressed to the stem except at the time of flowering. Spikelets ovate. Florets closely imbricate, varying in number, connected at base by a thin web.—Dry grounds.—July, August.—Perennial.

POA ANNUA. *L.* *Annual spear grass.*

Panicle divaricated; spikelets ovate; florets a little remote, five ribbed, destitute of a web; stem oblique, compressed. *Sm.*

A smaller grass but equally common with the first. It is annual in duration, but rapid in increase, and commonly the first

grass to appear on new grounds. Culms smooth, flattened, spreading obliquely. Leaves flaccid, obtuse, their margin waved in the middle. Stipules sharp. Panicle erect, with its branches depressed when old.

29. BRIZA.

Briza Canadensis. *Mich.* *Rattlesnake grass.*

Panicle lax, spikelets erect, with from four to ten florets; calyx very small; outer valve of the corollas oval, acute. *Mich. abr. m. t.*

A large grass found in meadows and readily recognized by its swelling spikelets. Stem erect, smooth. Leaves rough on the back. Panicle loose, with slender branches, nodding. Spikelets numerous, on distinct footstalks, ovate, erect or nodding. Valves of the calyx short and narrow. Outer valve of the corolla oval, inflated, acute, with a scarious point and margin. Inner valve obtuse.—July.

30. FESTUCA.

Festuca elatior. *L.* *Tall Fescue grass.*

Panicle drooping, spreading loosely every way, much branched; spikelets ovate-lanceolate, acute; florets cylindrical, obscurely ribbed. *Sm.*

Stem three or four feet high, glabrous. Leaves wide and long, smooth with a rough margin. Panicle large, decompound, loose and nodding. Spikelets numerous, pedunculated, ovate-oblong, acute. Glumes of the calyx unequal, acute, keeled, glabrous. Florets numerous, two ranked, glabrous.—Meadows and thickets.—June.—Perennial.

This is a very productive and useful grass.

FESTUCA FLUITANS. *L.* *Floating fescue grass.*

Panicle branched, erect; spikelets subsessile, cylindric, awnless. *L.*

Syn. POA FLUITANS. Sm.

A thrifty aquatic grass, found in wet meadows and the edges of ponds and streams. Stems rooting at base, tall, round, smooth. Leaves flat, smooth, the lower ones loose and floating. Sheaths long, compressed. Panicle very long, nearly erect, with alternate branches pressed near to the stalk. Spikelets linear, round, upright. Calyx unequal, smooth, not very acute. Anthers short and round. This grass thrives in inundated grounds, and is very grateful to horses and cattle.—June, July.—Perennial.

31. BROMUS.

BROMUS SECALINUS. *L.* *Rye Brome grass.*

Panicle spreading; peduncles but little branched; spikelets ovate, compressed, of about ten distinct, somewhat cylindrical florets. *Sm.*

Stem erect, three feet high, smooth. Leaves flat, rough at the edge and underneath, somewhat hairy above. Sheaths smooth. Panicle spreading, its branches rough, unequal, mostly simple, and one flowered. Spikelets large, nearly oval, of about ten florets. Calyx unequal, smooth. Outer glume of the corollas swelling, with a rough awn inserted at the back a little below the tip.—June.—Perennial.

32. ARUNDO.

ARUNDO PHRAGMITES. *L.* *Common Reed.*

Calyx containing five florets, panicle loose. *L.*

A native of wet situations. Culm of the height of a man, very erect and smooth. Leaves lanceolate, long and broad, flat

and sharp pointed. Panicle erect or nodding, conspicuous for the long, slender, shining hairs which project from the flowers, and give the whole a bright silvery appearance.—Found at the edges of deep waters, particularly on the north side of Fresh Pond, where it resembles at a distance a field of standing corn. Flowers in July and August.—Perennial.

33. LOLIUM.

Lolium perenne. *L.* *Ray grass. Darnel.*

Spike awnless; spikelets compressed, longer than the calyx. *Sm.*

Stem a foot or more in height, round, smooth. Leaves smooth, with short stipules clasping the stem. The stem terminates in a long, smooth, flexuous rachis or receptacle, to the two sides of which the spikelets are fixed, alternately, and at some distance from each other. Calyx sessile, of one valve, containing a flat ovate, acute, sharp edged spikelet of close lanceolate florets.—May, June.—Perennial.

34. TRITICUM.

Triticum repens. *L.* *Couch grass.*

Calyx subulate, many nerved, five flowered; florets sharp pointed; leaves flat; root creeping. *Sm.*

This grass has a long, creeping root, penetrating deeply into the earth, and very tenacious of life, which renders it a troublesome weed in cultivated grounds. Stem about two feet high. Leaves spreading, flat, rough on the edge and upper surface. Stem ending in a flexuous receptacle, bearing two rows of alternate, sessile spikelets, more numerous and crowded, than in Lolium perenne. Glumes all lanceolate, subulate, and acuminate.—Flowers all summer.—Perennial.

35. ELYMUS.

ELYMUS VIRGINICUS. *L.* *Lyme grass.*

Spike erect; spikelets three flowered; involucre striated. *L.*

The large erect spikes of this grass resemble at a distance heads of barley. The stem is round and smooth. Leaves smooth, somewhat rough on the margin. The stem ends in a compressed, flexuous, toothed receptacle; each tooth supporting an involucre of four striated, rough, lanceolate glumes, ending in short awns. Each involucre contains two or three flowers. Calyx lanceolate with a straight terminal awn.—Marshes.—July.—Perennial.

36. HORDEUM.

HORDEUM JUBATUM. *Ait.* *Squirrel tail grass.*

Lateral florets abortive, their awns many times shortest; involucres setaceous, six times as long as the flower.

This grass is remarkable for the length and fineness of its awns, which give to its spikes a hairy appearance. Stems slender, smooth, and round, two feet high. Leaves rather short, rough on the back and edge. Sheaths smooth. Receptacle compressed, ciliate on the edges, jointed, breaking at the joints as the plant dries. Flowers two ranked, one at each joint or tooth of the receptacle. Each perfect floret is surrounded at its base by an involucre of six long capillary awns, two of which are distinct; the other four unite in pairs a short way from their insertion, each pair with a minute, abortive floret in its fork. Outer glume of the calyx lanceolate, ending in an awn six times its length, and equalling those of the involucre.—Marshes.—June.

TRIGYNIA.

37. LECHEA.

LECHEA MAJOR. *L.* *Large Pin weed.*

Leaves ovate-lanceolate, flowers lateral, scattered. *L.*

An upright hairy plant, found upon rocks, dry hills, and sandy fields exposed to the sun. Stem from one to two feet high, stiff, brittle, purple, covered with hair. Leaves nearly oval, reflexed at the margin, downy, whitish underneath. Flowers small, obscure, crowded upon the ends and sides of the branches, followed by roundish capsules of the size of a large pin head.—July, August.

LECHEA MINOR. *L.* *Small Pin weed.*

Leaves linear-lanceolate, flowers panicled. *L.*

Grows with the last in dry sterile situations, and is about half its size, its branches finer and more spreading. Stem upright, less hairy than the last, giving off leaves and branches somewhat in whorls. Leaves narrow, revolute at the margin. Branches numerous, mostly simple. Flowers minute, in small lateral and terminal racemes. Capsules round, not larger than mustard seed.—July, August.

38. MOLLUGO.

MOLLUGO VERTICILLATA. *L.* *Carpet weed.*

Leaves whorled, wedge-form, acute; stem subdivided, decumbent; peduncles one flowered. *L.*

A small, flat, spreading plant common in cultivated ground. Stems prostrate, jointed, simple or compound, giving off at each joint a whorl of wedge-shaped or spatulate leaves, and a few small flowers on simple footstalks.—Flowers at midsummer and after.

39. PROSERPINACA.

PROSERPINACA PALUSTRIS. *L.* *Spear leaved Proserpinaca.*

Lower leaves subpinnatifid or cut-serrate; the rest linear-lanceolatè, sharply serrate. *Mich.*

An aquatic, remarkable for its very hard, triangular, axillary fruit. The leaves stand alternately on the stem, are narrow, pointed, with very acute serratures. When the plant grows in the water, its immersed leaves are cut into linear segments. Flowers two or three in the axil of each leaf. Nut bony, three sided, three celled.—Found in meadows and ponds.—June, July.

Class IV. TETRANDRIA. *Four stamens.*

Order I. *MONOGYNIA. One style.*

40. CEPHALANTHUS. Proper calyx superior, funnel form; common receptacle globular; seed one, downy.

41. PLANTAGO. Calyx four cleft; corolla four cleft; inferior with a reflected border; stamina very long; capsule two celled, opening transversely.

42. CENTAURELLA. Calyx four parted; corolla four parted, somewhat bell shaped; capsule invested with the permanent corolla and calyx, one celled, two valved.

43. MITCHELLA. Corolla monopetalous, superior, two on each germ; stigmas four; berry bifid, four seeded.

44. HOUSTONIA. Corolla monopetalous; calyx four toothed; capsule two celled, two valved.

45. GALIUM. Corolla flat, superior; seeds two.

46. CORNUS. Calyx four toothed; corolla four petalled, superior; drupe with a two celled nut.

47. POTHOS. Spathe one leaved; spadix simple, covered with flowers; calyx none; petals four; berry mostly two seeded.

48. ISNARDIA. Calyx campanulate, four cleft, permanent; corolla none; capsule four celled.

Order II. *DIGYNIA. Two styles.*

49. HAMAMELIS. Involucre three leaved; proper calyx four leaved; petals four; nut two celled, with two horns.

Order IV. *TETRAGYNIA.*

50. ILEX. Calyx four toothed; corolla monopetalous; styles none; berry four seeded.

51. POTAMOGETON. Calyx none; corolla four petalled; seeds four, sessile.

TETRANDRIA.

MONOGYNIA.

40. CEPHALANTHUS.

CEPHALANTHUS OCCIDENTALIS. *L.* *Button bush.*

Leaves opposite or in threes. *L.*

Button bush or river bush is a frequent ornament of the water side, its insulated thickets furnishing a safe retreat for the nests of the black bird (Oriolus phœniceus.) The shrub rises five or six feet out of the water, its leaves are tough, spreading, pointed, and entire. In the month of July it puts forth its spherical heads of flowers, which at a distance appear not unlike the balls of the plane tree. Receptacle globular, of the size of a large pea, covered with whitish funnel shaped flowers. The long projecting stamens give to the whole a bristly aspect. The appearance of this shrub on elevated ground, often indicates the presence of springs of water.

41. PLANTAGO.

PLANTAGO MAJOR. *L.* *Large plantain.*

Leaves ovate, smoothish, somewhat toothed with rather long footstalks; scape round; flowers imbricated; seeds numerous. *Sm.*

This vegetable, which grows at every one's door, and not the less for being trampled under foot, is in considerable repute among many people as a refrigerant external application. Leaves spreading on the ground, on channelled footstalks containing strong fibres, like others of the genus, which draw out when the stalks are broken. Spikes very long and close. As in others of the kind, the flowering commences at bottom and proceeds very gradually toward the top.—Flowers most of the summer.—Perennial.

PLANTAGO LANCEOLATA. *L.* *Ribwort or field plantain.*

Leaves lanceolate, tapering at each end; spike ovate, naked; scape angular. *Sm.*

Distinguished from the last by its narrow leaves, short spikes, and furrowed stalk. The leaves are lanceolate, acute, entire, and strongly ribbed. Stalk upright, deeply channelled. Spike dark coloured, ovate, with a circle of projecting, whitish stamens.—Pastures and road sides.—From May to October.—Perennial.

PLANTAGO MARITIMA. *L.* *Sea plantain.*

Leaves linear, mostly entire, channelled, woolly at the base; spike cylindrical, scape round. *Sm.*

Found on salt marshes and known by its leaves, which are fleshy, linear-subulate, and hollowed out on their inner side. Spike cylindrical, of short or moderate length.—Flowers in July and August.—Perennial.

42. CENTAURELLA.

CENTAURELLA PANICULATA. *Mich.* *Late Centaurella.*

Stem branching above; branches subdivided; panicle erect, many flowered; segments of the corolla oval; style much shorter than the germ. *Mich.*

Syn. *BARTONIA PANICULATA.* *Muhl.*

A slender, upright plant, found in meadows, flowering about August. Stem square, often twisted. Leaves opposite, minute, subulate, resembling scales. Flowers small, white, on the ends of the branches, which are erect and simple or compound.

43. MITCHELLA.

MITCHELLA REPENS. *L.* *Chequer berry.*

A handsome little creeping plant, the only species of its ge-

nus. It is found in woods about the roots of trees, creeping in the decayed leaves. Stems furnished with opposite, round, or heart shaped, smooth, petioled leaves, about the size of the finger nail. Corollas purplish white, funnel form, four cleft, hairy within, bearing the stamens in their sinuses. The most remarkable circumstance in this genus is that two calyxes and corollas stand on a common germ, so that two apparent flowers produce only one berry. The blossoms are exceedingly fragrant, and the leaves sometimes variegated.—June, July.—Perennial.

44. HOUSTONIA.

HOUSTONIA CÆRULEA. *L.* *Bluish Houstonia.*

Root leaves ovate; stem compound; first peduncles two flowered. ***L.***

Common among the grass in moist ground, flowering in May and afterward. The stems are slender, repeatedly forked, the divisions supporting single flowers. The root leaves are spatulate or oval, tapering into footstalks; those of the stem opposite, situated at the forks and elsewhere, lance-oval, the upper ones sessile. Flowers not larger than violets, with which they grow, bluish white, yellow at the centre, consisting of a slender tube with four cross shaped spreading segments.—Perennial.

HOUSTONIA LONGIFOLIA. *Willd.* *Long leaved Houstonia.*

Leaves lanceolate, narrowed at each end; flowers corymbed. ***Willd.***

Found in dry soils at Blue hills and elsewhere, not commonly exceeding four or five inches in height. Stem erect, four sided, branching toward the top. Leaves opposite, lanceolate, somewhat obtuse. Flowers purplish, in a terminal corymb.—June, July.—Perennial.

45. GALIUM.

GALIUM ASPRELLUM. *Mich.* *Pointed Cleavers or Clivers.*

Stem decumbent, rough backward; leaves in sixes, oval-lanceolate with a flaccid point; flowers on very short pedicels; fruit smooth. *Mich. abr.*

Found in thickets and low grounds. Stem weak, supported by plants around it, like many others of the genus; rough with minute reflexed prickles, as are also the ribs and margins of the leaves. Leaves in whorls of six, lanceolate, with a slender, scarious, curved point. Flowers white. Fruit smooth, very minute.—June, July.—Perennial.

GALIUM TINCTORIUM. *L.* *Dyers Cleavers.*

Leaves linear, those of the stem in sixes, of the branches in fours; stem flaccid; peduncles two flowered; fruit smooth. *L.*

A weak, branching plant, rough with reflexed prickles. Leaves linear-lanceolate, obtuse, whorled, the larger ones in sixes, smaller ones in fours. Peduncles very small, supporting minute white flowers, which are succeeded by smooth fruit.—Thickets and low ground.—June, July.—Perennial.

According to Kalm the roots dye a permanent red.

GALIUM VERUM. *L.* *Yellow Bedstraw.*

Leaves eight in a whorl, channelled, entire, rough; flowers in dense panicles; fruit smooth. *Sm.*

Grows at Roxbury in dry, open pastures. Stem upright, slender, pubescent. Leaves linear, rough, with the edges rolled back, pointing downward. Branches opposite, unequal, leafy, many flowered. Flowers small, yellow, followed by minute smooth fruit.—June, July.—Perennial.

GALIUM BRACHIATUM. *Muhl.* *Cross Cleavers.*

Stems erect, smooth; leaves in fours, oval, ciliate; peduncles divaricate, few flowered; fruit bristly.

Syn. *GALIUM CIRCAEZANS. Mich.*

Found in woods. Stem upright, smooth, minutely pubescent. Leaves an inch, or an inch and an half long, and more than half as broad, three nerved, hairy at the margin and nerves. Branches few, near the top, opposite, few flowered. Peduncles nearly simple, bent in various directions, making angles at every flower, and giving off at the same time a minute leaf. Fruit a little burr with its short footstalk reflected.—June, July.—Perennial.

GALIUM APARINE. *L.* *Common Cleavers.*

Leaves in eights, lanceolate, carinate, rough, prickly backwards; stem flaccid; fruit bristly. ***Sm.***

Stem brittle, weak, much branched, prickly backward, leaning upon other plants for support. Leaves in whorls of about eight together, lance-obovate, their margin and keel rough backward. Flowers numerous, small, white, on axillary and terminal peduncles. Fruit hispid.—In moist thickets.—May, June.—Annual.

46. CORNUS.

CORNUS CANADENSIS. *L.* *Dwarf Cornel.*

Herbaceous; upper leaves in whorls, slightly petioled, veined. ***Willd.***

A handsome plant of half a foot in height. Root creeping.

Stem simple, ascending, surmounted at top with a single whorl of six oval leaves, two of which are lower and larger. The umbel of flowers is surrounded by a large white involucre of four leaves, which at first sight is taken for the petals of a simple flower. The berries or drupes are globular and red. Among the fertile stems are found a multitude of barren ones, supporting whorls of four leaves.—Woods, Brooklyn, Cambridge.—May, June.—Perennial.

CORNUS FLORIDA. *L.* *Dogwood tree.*

Arboreous; involucre very large with inversely heart shaped leafets. *L.*

A conspicuous and very ornamental tree, covered early in June with a profusion of large white flowers. The leaves are oval, acuminate, pale underneath. Flowers in heads surrounded by a very large, nearly white involucre, the four leaves of which have their points inflexed so as to produce the appearance of a notch. Fruit oval, red. The wood is hard and close grained, but the trunk does not attain a sufficient size to become of great use. The bark is bitter and tonic. It is often substituted with success for the Peruvian bark.—Found in the woods at Quincy and some other places, but not common.—May, June.

CORNUS ALBA. *L.* *White berried Cornel.*

Branches recurved; leaves broad, ovate, hoary underneath; cymes naked, flat. *l'Her.*

A shrub or small tree with spreading branches, and ovate, acuminate leaves, whitish underneath. Cymes without involucres, as are the subsequent species. Flowers white, succeeded by white fruit. In rich ground it sometimes blossoms twice a year.—Roxbury, Cambridge.

CORNUS CIRCINATA. *l'Herit.* *Round leaved Cornel.*

Branches warty; leaves orbicular, white-downy underneath; cymes naked, flat. *l'Her.*

Syn. *CORNUS TOMENTULOSA. Mich.*

An erect slender shrub, distinguished by its spotted or warty branches, but particularly by its large, rounded, acuminate leaves, which are white and downy, almost woolly, underneath. Cymes terminal, flattened. Fruit bluish.—On Brighton road.—June and after.

CORNUS PANICULATA. *l'Herit.* *Panicled Cornel.*

Branches erect, leaves ovate, hoary underneath, cymes panicled. *l'Her.*

A more common shrub than the two last, sufficiently distinguishable by its smaller leaves. The cymes are numerous upon the branches, more or less oblong, and decidedly panicled when in fruit. The berries or drupes are white, as in Cornus alba.—Low grounds.—June, July.

47. POTHOS.

POTHOS FOETIDA. *Mich.* *Skunk cabbage.*

Stemless; leaves oval, concave; spadix nearly globular. *Mich.*

Syn. *DRACONTIUM FOETIDUM. L.*

A fœtid, repulsive plant, exceedingly meritorious of the name it bears. The flowers which appear in April are not destitute of beauty, or at least of singularity. All that at this time appears above ground is the hollow, boat shaped, inflated spathe, handsomely spotted red and yellow, with its acute top recurved. In this is the oval spadix, covered with perfect tetrandrous flowers. The fruit is a large globular fleshy mass, formed of the enlarged spadix, containing many large, round

seeds. During summer the large bunches of dark green leaves are conspicuous in every meadow, swamp, and brook side.—Perennial.

48. ISNARDIA.

ISNARDIA PALUSTRIS. *L.* *Isnardia.*

A weed swimming in ditches and streams of water, or creeping on wet ground. Leaves opposite, oval or ovate, smooth. Flowers small, sessile in the axils of the leaves, without beauty. —June.—Annual.

DIGYNIA.

49. HAMAMELIS.

HAMAMELIS VIRGINICA. *L.* *Witch hazel.*

The variegated appearance of the American forest during the months of autumn, has been repeatedly noticed by travellers. Among the crimson and yellow hues of the falling leaves there is no more remarkable object than the Witch hazel, in the moment of parting with its foliage, putting forth a profusion of gaudy, yellow blossoms, and giving to November the counterfeited appearance of spring. It is a bushy tree, sending up a number of oblique trunks, about the size of a man's arm or larger. The leaves are oval or obovate, loosely waved or toothed upon the margin. Flowers in axillary bunches. Petals three or four times as long as the calyx, yellow or straw coloured, ribbon shaped, spreading and reflexed. Fruit a small nut, of two cells, terminating in two horn-like projections.—Wet woods.—October, November.

The wood is white, its fibres fine and flexible. The twigs were formerly used in the imposture of the diving, or mineral rods, supposed to indicate the existence of precious ores.

TETRANDRIA.

50. ILEX.

ILEX OPACA. *Ait.* *American Holly.*

Leaves oval, with strong spreading spinous teeth; fascicles of flowers lax, peduncles compound; calyxes rather acute, smooth; fruit ovate. ***Mich.***

This tree is more interesting, from being one of the few evergreen trees, which we possess, that are not of the coniferous tribe. Its leaves are tough, smooth, and shining, furnished at the edge with short, rigid, acute spines. The flowers are numerous, small, of a greenish white, growing in bunches around the branches. Berries red, falling very late.—Quincy, Cohasset.—June.

51. POTAMOGETON.

POTAMOGETON NATANS. *L.* *Floating pond weed.*

Upper leaves oblong-ovate, rounded at the base, petioled, floating. *Sm.*

A very common species of pond weed, growing near the muddy banks of deep waters. Leaves oblong, sometimes a little hearted at base, two inches long, floating on the surface, on footstalks accommodated to the depth of the water. In June the spikes of dull flowers emerge on solitary round footstalks, surrounded at base by lanceolate bractes or stipulæ.

Class V. PENTANDRIA. *Five stamens.*

Order I. *MONOGYNIA. One style.*

A. *Flowers monopetalous, inferior, with four naked seeds.*

52. ECHIUM. Corolla irregular, bell shaped with the throat naked; stigma two cleft.

53. CYNOGLOSSUM. Corolla funnel form, the throat closed with arched valves; seeds depressed, fixed laterally to the style.

54. MYOSOTIS. Corolla salver shaped, five cleft, lobes slightly notched; throat closed with concave valves.

B. *Flowers monopetalous, inferior; seeds in a vessel.*

55. ANAGALLIS. Corolla wheel shaped; stamens hairy; capsule opening transversely.

56. LYSIMACHIA. Corolla wheel shaped; stigma obtuse; capsule one celled, ten valved.

57. MENYANTHES. Corolla hairy; stigma cloven, capsule one celled.

58. CONVOLVULUS. Corolla campanulate, plaited; stigmas two; capsule two or three celled; the cells two seeded.

59. DATURA. Corolla funnel form, plaited; calyx tubular, deciduous; capsule two celled, four valved.

60. HYOSCYAMUS. Corolla funnel form, ir-

regular; stamens inclined; stigma capitate; capsule two celled, covered with a lid.

61. Verbascum. Corolla wheel shaped; stamens declined, bearded; stigma simple; capsule two celled.

62. Azalea. Corolla bell, or funnel form; stamens inserted in the receptacle; stigma obtuse; capsule five celled.

63. Solanum. Corolla wheel shaped; anthers slightly cohering, opening by two pores at the top; berry two celled.

C. *Flowers monopetalous, superior.*

64. Campanula. Corolla bell shaped, closed at the bottom by valves bearing the stamens; stigma three cleft; capsule three or five celled, opening by lateral pores.

65. Lobelia. Corolla irregular, cloven; anthers united; stigma capitate; capsule two or three celled.

66. Diervilla. Calyx oblong, five cleft; corolla twice as long, funnel shaped, five cleft; capsule oblong, four celled, many seeded.

67. Triosteum. Corolla monopetalous, five lobed, unequal; calyx as long as the corolla; berry three celled; cells one seeded.

D. *Flowers five petalled, inferior.*

68. Ceanothus. Calyx tubular; petals five, vaulted; berry dry, three seeded.

69. CELASTRUS. Calyx flat; corolla five petalled, spreading; capsule three angled, three celled; seeds covered with a hood.

70. VITIS. Petals five, shrivelled, mostly cohering at top; style none; berry five seeded.

71. IMPATIENS. Calyx two leaved; corolla irregular, with a hooded, spurred nectary; anthers united; capsule superior, five valved, elastic.

72. VIOLA. Calyx five leaved; corolla irregular, spurred; anthers cohering; capsule one celled, three valved.

E. *Flowers incomplete.*

73. THESIUM. Calyx five cleft, bearing the stamens; corolla none; seed one, covered.

Order II. *DIGYNIA. Two styles.*

A. *Corolla monopetalous.*

74. APOCYNUM. Corolla bell shaped; five nectareous filaments alternating with the stamens; follicles two.

75. ASCLEPIAS. Corolla reflected; nectaries five, ovate, concave, with a little horn projecting from each; follicles two.

76. GENTIANA. Corolla tubular at the base, without nectariferous pores; capsule two valved, one celled, many seeded.

77. CUSCUTA. Calyx four or five cleft; corolla four or five cleft; capsule two celled, opening transversely at the base.

B. *Flowers incomplete.*

78. Salsola. Calyx five parted; corolla none; capsule one seeded; seed spiral.

79. Chenopodium. Calyx five parted, five cornered; corolla none; seed one, lenticular, invested with the calyx.

80. Ulmus. Calyx five cleft; corolla none; seed one, inclosed in a flat membranous capsule.

C. *Umbelliferous. Flowers five petalled, superior, two seeded.*

81. Hydrocotyle. Umbel simple; involucre four leaved; petals entire; fruit orbicular, compressed.

82. Sanicula. Umbels in heads; flowers of the centre abortive; seeds muricate.

83. Heracleum. General involucre deciduous; flowers radiant; petals notched, with the point inflected; fruit elliptic, notched, compressed, striate, with a dilated margin.

84. Conium. Involucres general and partial, the partial half wanting; petals heart shaped, equal; fruit ovate, gibbous, five ribbed on each side.

85. Angelica. Involucres general and partial; petals incurved; styles reflected; fruit roundish, solid, with three wings on each side.

86. Sium. Involucres general and partial, many leaved; petals heart shaped; fruit nearly oval, compressed, striate.

87. Sison. Involucres about four leaved;

umbel of few rays; petals inflected; fruit ovate, striate.

88. CICUTA. Partial involucres without the general; petals somewhat flat; fruit subovate; grooved.

Order III. *TRIGYNIA. Three styles.*

89. VIBURNUM. Calyx five parted, superior; corolla five cleft; berry one seeded.

90. SAMBUCUS. Calyx five parted, superior; corolla five cleft; berry three seeded.

91. RHUS. Calyx five parted, inferior; corolla five petalled; berry one seeded.

92. SAROTHRA. Calyx five parted; corolla five petalled; capsule one celled, three valved.

Order V. *PENTAGYNIA. Five styles.*

93. ARALIA. Flowers umbelled, with involucres; calyx five toothed, superior; corolla five petalled; berry five seeded.

94. DROSERA. Calyx five parted, corolla five petalled, inferior; capsule one celled, three or five valved, opening at top; seeds many.

95. STATICE. Calyx one leafed, entire, plaited; petals five; seed one, invested by the calyx.

PENTANDRIA.

MONOGYNIA.

52. ECHIUM.

ECHIUM VULGARE. *L.* *Vipers Bugloss.*

Stem bristly and tuberculated; stem leaves lanceolate and rough with stiff hairs; flowers in lateral spikes. *Sm.*

Stem erect, round, covered with firm bristles standing on little protuberances. Leaves rough, covered with the same kind of bristles. Spikes of flowers axillary, recurved, gradually straightening, bearing a row of crowded purplish flowers. —Road side.—Roxbury.—June, July.—Biennial.

53. MYOSOTIS.

MYOSOTIS SCORPIOIDES. *L.* *Mouse ear Scorpion grass.*

Seeds smooth; leaves elliptic lanceolate; racemes without bractes, many flowered. *Sm.*

I have only met with the aquatic variety of this plant. It is found about the edges of ditches and streams. Stem rooting at base, ascending, mostly smooth. Leaves scattered, broad lanceolate, sessile, commonly smooth. Racemes terminal, rolled back at the end. Flowers pointing one way, small, rose coloured.—From June to October.—Perennial.

54. CYNOGLOSSUM.

CYNOGLOSSUM OFFICINALE. *L.* *Common Hounds tongue.*

Stamens shorter than the corolla; leaves broad lanceolate, downy, sessile. *L.*

An erect, downy plant, exhaling an unpleasant odour. Stem about two feet high, round, hairy. Leaves covered on both sides with a grayish down, lanceolate, entire, somewhat waved, the lower ones petioled, upper ones sessile, clasping, inclining to an oblong heart shape. Flowers in several racemes, which are recurved at the end. Calyx downy. Corolla dull purple. Seeds furnished with small hooks serving for their dispersion. —Road side.—Charlestown.—June.—Biennial.

55. ANAGALLIS.

ANAGALLIS ARVENSIS. *L.* *Scarlet Pimpernel.*

Leaves ovate, dotted beneath; stem procumbent. *Sm.*

An humble but very delicate flower. Stem square, procumbent. Leaves ovate, covered on the under side with purple dots. Flowers on axillary footstalks, bright scarlet. Capsule spherical, bursting crosswise, a character at any time ascertained by pressing it. In England it has received the name of "Poor man's weather glass," from the circumstance that the flowers close in bad weather, being very sensible to changes of the air.—Common at South Boston.—June and after.—Annual.

56. LYSIMACHIA.

LYSIMACHIA CILIATA. *L.* *Heart leaved Loosestrife.*

Leaves opposite, heart-oval, petioles ciliated, flowers chiefly in pairs, drooping.

This Lysimachia is distinguishable from the subsequent species by its broader leaves obtuse at base, and its larger flowers. Rises from one to two feet in height, gives off opposite, oblong, pointed leaves somewhat heart shaped at base. Leaf stalks fringed with hairs. Flowers usually in pairs, yellow, as are all the following species, on simple axillary peduncles, drooping; petals crenate, acuminate.—Grows on Lynn beach island.—June July.—Perennial.

LYSIMACHIA HYBRIDA. *Mich.* *Hybrid loosestrife.*

Leaves opposite, petioled, lanceolate, acute at base; flowers drooping.

A more common species than the last, which it resembles. Stem erect, with opposite branches. Leaves of the stem long, reflexed, narrow, tapering at both ends, on long footstalks. Flowers on the ends of the branches, drooping; petals crenate. —Grows among the grass in wet meadows, flowering in July.

LYSIMACHIA QUADRIFOLIA. *L.* *Four leaved loosestrife.*

Leaves in fours, nearly sessile, peduncles in fours, one flowered. *L.*

A plant of singular regularity, having its long simple stem surrounded by whorls of four oval-lanceolate leaves, with the same number of flowers on capillary footstalks in their axils. Sometimes the number of flowers and leaves in a whorl varies to three or five.—Every where in low ground.—June.

LYSIMACHIA THYRSIFLORA. *Mich.* *Tufted loosestrife.*

Racemes lateral, pedunculated.

Stem simple, round. Leaves sessile, opposite, lanceolate, acute. Flowers small, in short rounded racemes, supported on peduncles from the axils of the leaves.—Meadows.—June, July.—Perennial.

LYSIMACHIA STRICTA. *Ait.* *Upright loosestrife.*

Racemes terminal; petals lanceolate, spreading; leaves lanceolate, sessile. *Ait.*

Syn. *LYSIMACHIA RACEMOSA. Lam. Mich.*
LYSIMACHIA BULBIFERA. Curtis.

A very elegant species, its long, upright raceme appearing like a hollow cylinder of flowers. Stem erect, smooth. Leaves

glabrous, dotted, acute. Raceme often half a foot in length. Flowers on horizontal, capillary footstalks, an inch in length.—Mr. Curtis has observed, that this species produces stem bulbs in the axils of the leaves.—Low grounds.—July.—Perennial.

57. MENYANTHES.

MENYANTHES TRIFOLIATA. *L.* *Buck bean.*

Leaves ternate. *L.*

Leaves inversely ovate, slightly toothed or repand on the margin, three on a petiole. Flower stalk round, erect, bearing a pyramidal cluster or thyrse of elegant reddish white flowers. Corolla of five reflexed segments, very hairy on the inner side. —Grows in a small pond near Charles river, upper part of Cambridge.—May.—Perennial.—A bitter plant of some medicinal reputation.

58. CONVOLVULUS.

CONVOLVOLUS SEPIUM. *L.* *Large bindweed.*

Leaves arrow shaped with the posterior lobes truncated; peduncles square, one flowered; bractes heart shaped, close to the flower. *Sm.*

The American variety of Convolvulus sepium is one of the finest of the genus. It climbs about fences and bushes in low ground, its large red and white blossoms expanding in June and July. Stem twining, a little angular, smooth. Leaves large, arrow shaped, the hinder lobes cut off, particularly in the upper leaves. Flower stalks square, axillary, bearing a pair of heart shaped bractes so close to the flower as to appear like its calyx.—Perennial.

CONVOLVULUS ARVENSIS. *L.* *Small bindweed.*

Leaves arrow shaped, the lobes acute; flowers generally solitary; bractes minute, remote from the flower. *Sm.*

Not more than half the size of the last. Stems numerous, twining. Leaves arrow or halbert shaped, with acute lobes. Peduncles angular, with a pair of very small acute bractes about their middle. Flowers nearly white.—Dorchester.—June.

59. DATURA.

DATURA STRAMONIUM. *L.* *Thorn Apple or Apple Peru.*

Fruit spinous, ovate, erect; leaves ovate, smooth. *L.*

Stem erect, green, often solid, repeatedly forked, with spreading branches. Leaves from the forks of the stem, ovate, or heart shaped if they are spread out, smooth, sinuated or loosely toothed with large unequal teeth, unequal at base. Flowers axillary, on short stalks, upright, white. Fruit of the size of a small hen's egg, covered with thorns.—Among rubbish.—August, September.—Annual.

A variety much more common than the last, and considerably larger in size, has a uniformly hollow stem, purple, covered with light dots; the flowers light purple or blue, striped on the inside. It answers in every respect to the description of Datura tatula, as laid down in botanical books. I incline to think the two species should be incorporated into one, if there are no better discriminating marks than those usually laid down. The dots in the purple cuticle of the American plant do not appear to result from warts, or any inequalities in its structure, but simply from variation of colour. The sensible qualities of the two varieties are the same.

It must be remarked however, that both the plants here described differ from the representations in the English Botany, and in Woodville's Medical Botany; 1st in the form of the anthers, which are very oblong, four times longer than broad; 2d in the stigma, the sides of which are parallel; 3d in the dissepiment of the capsule which is thin, about one quarter the thickness of the valves.

The poisonous properties of this plant, as well as its application to medicine, are well known. As a remedy in asthma it has recently acquired great reputation.

60. HYOSCYAMUS.

HYOSCYAMUS NIGER. *L.* *Henbane.*

Leaves sinuated, embracing the stem; flowers sessile. *L.*

Of the natural order of *luridæ* like the last, equally poisonous, and of no less utility in medicine. It is a bushy, hairy, glutinous, fœtid plant. Leaves alternate, without footstalks, with acute teeth or rather lobes; those of the root large and spreading, often turning to one side. Corolla of a light greenish yellow, reticulated with purple veins. Capsule round, two celled, covered with a lid, and crowned with the permanent, five parted calyx. Seeds numerous, small.—In waste grounds.—June, July.—Biennial.

61. VERBASCUM.

VERBASCUM THAPSUS. *L.* *Common Mullein.*

Leaves decurrent, woolly on both sides; stem simple. *L.*

Every body knows this tall, woolly, and very common plant. Stem erect, straight, woolly, winged by the decumbent base of the leaves. Leaves exceedingly woolly on both sides, ovate-lanceolate, sessile, slightly serrate or waved on the margin. The stem terminates in a long, thick, cylindrical spike, with handsome five parted yellow flowers.—Dry pastures.—July, August.—Biennial.

62. AZALEA.

AZALEA VISCOSA. *L.* *Wild honeysuckle, Swamp pink.*

Leaves with a rough margin; corollas viscid, hairy. *L.*

A fine flowering shrub, very common among the brushwood in low land. The small branches and peduncles are commonly more or less bristly. Leaves crowded, lanceolate-ovate, slightly toothed, hairy on the midrib and margin. Flowers in terminal, umbel-like corymbs. Corollas funnel shaped, varying in colour, but commonly white, hairy and glutinous on the outside.—June, July.

Several varieties occur in the colour of the leaves, parts of the flower and small branches.

63. SOLANUM.

Solanum dulcamara. *L.* *Bitter sweet, Woody nightshade.*

Stem shrubby, flexuous, without thorns; upper leaves hastate; clusters cymose. *Sm.*

Stem woody, climbing upon fences and bushes. Lower leaves heart shaped, entire; upper ones ovate, furnished with two ears at the base giving them a hastate form. Clusters on the sides and ends of the stem, on branching and spreading stalks, drooping. Flowers with five acute, spreading or reflexed, purple segments. Anthers forming a yellow tube projecting from the flower. Berries oval, bright red. This plant is common in low grounds, by the side of brooks, &c. As a medicinal article it holds a place in most dispensatories.—July.

Solanum nigrum. *L.* *Black nightshade.*

Stem herbaceous, without thorns. Leaves ovate, bluntly toothed and waved. Umbels lateral, drooping. *Sm.*

Much more ordinary in its appearance than the last. Stem erect branching, angular and sometimes winged. Leaves ovate alternate. The umbels come out from the sides of the stem, remote from the leaves. They consist of drooping white flowers, with yellow anthers. Berries round, black. This variety

was probably imported from Europe. It grows among rubbish, and has the aspect and reputation of a poisonous plant.

64. CAMPANULA.

CAMPANULA PERFOLIATA. *L.* *Clasping Bell flower.*

Stem simple; leaves heart shaped, toothed, clasping; flowers sessile, aggregate. *L.*

Syn. *CAMPANULA AMPLEXICAULIS. Mich.*

Found by the road side in Medford and elsewhere. Stem erect, leafy, angular, slightly pubescent. Leaves small, alternate, reniform-heart shaped, tooth-crenate, clasping the stem. Flowers axillary, sessile. Segments of the calyx lanceolate, very acute, with a distinct middle rib. Corolla blue, spreading.—June.—Annual.

CAMPANULA ERINOIDES. *L.* *Slender Bell flower.*

Stem triangular, the angles rough backward; leaves linear-lanceolate; flowers terminal.

Syn. *CAMPANULA FLEXUOSA. Mich.*

Found in meadows among the high grass, supporting itself like a Galium on surrounding plants. Stem from eight to twenty inches in height, very slender and flexible, uniformly triangular, the angles rough with minute reflexed prickles. Leaves given off successively from the three sides, linear, sessile, nearly entire, the midrib and margin rough backward. A variety occurs with lanceolate leaves with a few minute teeth. Branches few, near the top, axillary, leafy, one or two flowered. Flowers small, terminal. Corolla very small, twice or thrice the length of the calyx, deeply five cleft, white with pale blue veins. Filaments valve like, hairy. Stigma trifid. Capsule globular, three celled.—Found at Medford and Brighton. Variety 2d at Sudbury.—June, July.

65. LOBELIA.

LOBELIA CARDINALIS. *L.* *Cardinal flower.*

Stem erect, leaves broad-lanceolate, serrate; spike terminal, pointing one way. *L.*

This superb plant, cultivated and much prized in Europe, is a native of our meadows and brooksides. It rises to the height of two feet and upward, with a simple, erect, leafy stem. Leaves alternate, ovate-lanceolate, acuminate, and serrate. Raceme terminating the stem, consisting of large flowers, more or less inclining to one side, of a bright scarlet colour. Corolla with a long tube ending in five spreading segments, the three lower ones widest. Tube of stamens curved in at the top.—June, July.—Perennial.

LOBELIA PALLIDA. *Muhl.* *Pale Lobelia.*

Somewhat hairy; stem erect, simple; leaves oblong-spatulate, dentate; flowers spiked.

Syn. *LOBELIA SPICATA. Lam.*

Stem upright, smooth, or a little hairy. Leaves spatulate, obtuse at the end, tapering at base, slightly toothed or crenate, pubescent at the edge and under side, sessile. Flowers in a long terminal spike, on short peduncles, blue.—Moist pastures and road sides.—July.—Perennial.

LOBELIA INFLATA. *L.* *Indian tobacco.*

Stem erect; leaves ovate, slightly serrate, longer than the peduncles; capsules inflated. *L.*

Readily distinguished by its swelling, bladder-like pods, and its very subtle, acrimonious taste, not unlike that of green tobacco. Stem angular, hairy, branching at top, from one to two feet high. Leaves scattered or alternate, oval, nearly sessile, crenate or serrate on the edge. Stem and branches terminating in spikes of small blue flowers on short footstalks. Calyx

teeth subulate, as long as the corolla. Capsules oval, turgid.—Cambridge.—August.—Biennial.

The plant operates violently as an emetic, and has been used with advantage in asthma and some similar affections.

LOBELIA DORTMANNA. *L.* *Water Lobelia*

Leaves linear, two celled, entire; stem nearly naked. *L.*

A very singular aquatic plant. The leaves grow in a single tuft at the bottom of the water. They are from one to three inches long, recurved, blunt, and of a fleshy appearance. On cutting them across, they are found to consist of two empty parallel tubes. The stem rises out of water, bearing a few remote pendulous flowers of a pale blue colour. The whole plant gives out a milky juice on being broken.—Found in Fresh pond.—July.

66. DIERVILLA.

DIERVILLA CANADENSIS. *Muhl.* *Yellow Diervilla.*

Racemes terminal; leaves serrate. *L. sub. syn.*

Syn. *LONICERA DIERVILLA. L.*

This shrub with us is usually of small size. Leaves opposite, on short petioles, ovate, smooth, serrate, acuminate. Flowers of a pale yellow; small, funnel shaped, with five roundish, unequal segments. They grow in the axils of the upper leaves.—Woods, Cambridge, Brooklyn.—June.

67. TRIOSTEUM.

TRIOSTEUM PERFOLIATUM. *L.* *Feverwort.*

Leaves connate; flowers sessile, whorled. *Vahl.*

Syn. *TRIOSTEUM MAJUS. Mich.*

Not very common. I have only met with it in the upper part of Gambridge, and in Watertown. Stems from two to three feet high. Leaves large, oval, acuminate, suddenly nar-

rowed into a long, slender base, in pairs more or less connate. Flowers several in the axils of the leaves, sessile, appearing whorled. Corolla of a dull purple, tubular, somewhat curved. Berry round, yellow, crowned with the long spreading segments of the calyx, containing three hard seeds. Flowers in June.—Perennial.—It possesses medicinal qualities.

68. CEANOTHUS.

CEANOTHUS AMERICANUS. *L.* *Jersey tea.*

Leaves heart-ovate, acuminate, triply nerved; panicles axillary, elongated. ***Willd.***

A small white flowering shrub, not unfrequent in dry or sandy soils. Leaves two or three inches long, and one broad, finely serrate and tapering into a long point. From the axils of the upper leaves come out leafless branches bearing crowded bunches of minute white flowers. These are followed by dry, three seeded and somewhat triangular berries. The leaves were used, among other substitutes, for tea, during the American revolution.—Flowers in June.

69. CELASTRUS.

CELASTRUS SCANDENS. *L.* *Climbing staff tree. Wax work.*

Unarmed; leaves oblong, acuminate, serrate; racemes terminal; stem twining. ***Willd.***

A strong woody vine, twining round small trees and climbing to a great height. Flowers of a greenish white, in small racemes on the ends of the young shoots. The fruit is a berried capsule. When ripe, the three valves turn backward disclosing a bright scarlet berry. The valves are of a light red colour, partitioned in the middle and finally waved on the edge. —About fences and thickets.—June.

70. VITIS.

VITIS LABRUSCA. *Common wild grape vine.*

Leaves heart shaped, somewhat three lobed, dentate, downy underneath. ***Willd.***

This vine is dicœcious, a fact which Michaux affirms of all the species observed by him in America.* The leaves are very broad and white underneath. Clusters of flowers small, opposite to leaves, as are also the tendrils. Fruit large, purple and pleasantly flavoured. Found in woods in low ground.—June.

VITIS HEDERACEA. *Willd.* *Common creeper.*

Leaves quinate, ovate, acuminate, dentate. ***Willd.***

Syn. *HEDERA QUINQUEFOLIA. L.*
VITIS QUINQUEFOLIA. Lam. & Sm.
AMPELOPSIS QUINQUEFOLIA. Mich.

The common creeper is much cultivated as an ornament of walls. The stems climb to a great height, supported by radicating tendrils. Leaves in fives, petioled, smooth. Flowers in branched clusters; petals green, not united at their summit. Berries of the size of peas.—Found growing wild in woods and about fences.—June.

71. IMPATIENS.

IMPATIENS NOLI TANGERE. *Mich.* β. *Touch me not.*

Flower stalks solitary, many flowered; leaves ovate; joints of the stem swelling. ***L.***

Syn. *IMPATIENS MACULATA. Muhl.*

Found about brooks and in moist shades, flowering from June

* Excepting those placed in his genus *Ampelopsis*.

to September. The flowers are of a tawny yellow, spotted on the inside, and resembling small cups or pitchers, hanging on slender footstalks. Nectary horn shaped; petals spreading, the two lower ones large. The capsule when ripe bursts and scatters its seeds by an elastic power like the common balsamine of the gardens, another of the genus. Height of the plant about two feet; stems succulent, smooth; leaves ovate, toothed.—Annual.

72. VIOLA.

VIOLA BLANDA. *Willd.* *Sweet scented white violet.*

Stemless; leaves heart shaped, obtuse, rather flat, glabrous; petals beardless.

Leaves round-heart shaped, crenate; petioles twice or thrice the length of the leaves, half round, channelled, smooth. Flowers white with purple veins at bottom, fragrant. The two lateral petals are slightly bearded on the inside below the middle.—Moist land.—April, May.—Perennial.

VIOLA LANCEOLATA. *L.* *Spear leaved violet.*

Stemless; leaves lanceolate, crenate. *L.*

Root fibrous, sending out scions; leaves lanceolate, rather obtuse, on long petioles; flowers white with purple veins at bottom.—Wet ground.—May, June.—Perennial.—A considerable variety occurs in the width of the leaves, which are sometimes nearly ovate.

VIOLA PRIMULIFOLIA. *L.* *Spade leaved violet.*

Stemless; leaves oblong-heart shaped; petioles membranaceous. *L.*

Leaves oblong, ovate or heart shaped, crenate, their base extending down the leaf stalk, which becomes winged. We have two violets which answer the above description. One with white flowers and smoother leaves; the other with blue

flowers and hairy leaves. The last is by far the most common, being very abundant on dry hills and pastures. Its flowers resemble those of the next species.—May.—Perennial.

VIOLA CUCULLATA. *Ait.* *Hollow leaved violet.*

Stemless; leaves heart shaped, rather acute, smooth, hooded at base; flowers inverted; petals bent obliquely. *Ait.*

Leaves heart shaped, crenate or serrate, the younger ones rolled in at the base, the older ones expanded. Petioles twice the length of the leaves. Flowers blue.—Meadows and low grounds.—May.—Perennial.

VIOLA SAGITTATA. *Ait.* *Arrow leaved violet.*

Stemless; leaves oblong-acute, heart-arrow shaped, serrate, cut at the base, flowers inverted. *Ait.*

Leaves oblong, frequently obtuse, serrate, the lower serratures large and divergent, giving the leaf a sagittate appearance. Flowers blue, more hairy inside than the last, inverted when young, erect afterward.—Meadows.—May.

When the plant grows in a dry and rich soil, the leaves become hairy, and acquire a hastate form from the enlargement of the lower serratures or segments.

VIOLA PEDATA. *L.* *Pedate violet.*

Stemless; leaves pedate, seven parted. *L.*

Rather larger than the preceding species. Root fleshy, abrupt. Leaves perfectly pedate, consisting of from five to nine segments which are wedge-form or lanceolate, and mostly toothed at the end; the middle one distinct, the lateral ones connected. Flowers large, pale blue, erect.—Hills and sandy fields.—May, June.—Perennial.

VIOLA PUBESCENS. *Ait.* *Yellow violet.*

Stem erect, villous; leaves heart-shaped, pubescent; stipules oblong, serrulate at tip. *Ait. abr.*

Syn. *VIOLA PENNSYLVANICA. Mich.*

Stem simple, pubescent. Leaves alternate, broad-heart shaped, crenate, tapering to a point, twice as long as their petioles. Flowers solitary, from the axils of the leaves, yellow, veined.—May, June.—Perennial.

73. THESIUM.

THESIUM UMBELLATUM. *L.* *Umbelled Thesium.*

Flowers umbelled, leaves oblong. *L.*

Syn. *THESIUM CORYMBULOSUM. Mich.*

Stem round, slender, seldom exceeding a foot in height. Leaves oval-lanceolate, mostly entire, alternate, smooth. Branches near the top, few, alternate. Umbels of few flowers, terminal, with an involucre of about four leafets. Flowers on short peduncles. Calyx five cleft, the tube green, segments white. Stamens inserted on the calyx. Seed one.—Dry woods.—June.

DIGYNIA.

74. APOCYNUM.

APOCYNUM ANDROSÆMIFOLIUM. *Dog's bane.*

Stem straightish, herbaceous; leaves ovate, smooth on both sides; cymes terminal. *Mill.*

A handsome, smooth, branching plant. Stem two feet high, smooth, dark, with spreading branches. Leaves opposite, ovate, acute, entire. Flowers on the ends of the branches, of a pink or purplish white, bell shaped, their segments revolute. The plant abounds with milky juice. Its root is emetic, and hence is often denominated ipecac, a name vulgarly applied

to a great number of plants. The flowers have the property of catching flies. Common about thickets.—July.

75. ASCLEPIAS.

ASCLEPIAS SYRIACA. *L.* *Common Silk weed or Milk weed.*

Stem simple; leaves lance-oblong, gradually acute, downy underneath; umbels somewhat nodding. ***Mich.***

Very common by road sides and borders of fields. Stem three or four feet high, undivided. Leaves opposite, large, oblong. Umbels of flowers lateral and terminal, nodding. The pods or follicles contain large quantities of a fine silken down attached to the seeds, for which the plant has been cultivated in Europe and America. It is used as a substitute for feathers, fur, cotton, &c.—July.—Perennial.

ASCLEPIAS OBTUSIFOLIA. *Mich.* *Blunt leaved silk weed.*

Leaves closely sessile, oblong, obtuse, waved; umbel terminal, on a long peduncle; corollas smooth. ***Mich. abr.***

Leaves opposite, ovate, heart shaped at base, sessile, apparently clasping, very much waved on the margin, obtuse at the end, mucronated. Stem erect, supporting a terminal umbel of large flowers at a distance from the leaves. Cambridge, Sweet Auburn.—July.—Perennial.

ASCLEPIAS PURPURASCENS. *Purple silk weed.*

Leaves ovate, villous underneath; stem simple; umbels erect; nectaries resupinate. ***Mill.***

Stem upright; leaves oblong, rather acute, on short petioles; umbels terminal, erect; corollas dark purple; horns of the nectary bent horizontally inward.—Cambridge, on the Concord turnpike.—July.—Perennial.

ASCLEPIAS PULCHRA. *Willd.* *Water silk weed.*

Leaves lanceolate, pubescent underneath; stem divided toward the top; umbels erect, in pairs. ***Willd.***

Common in wet ground, by the sides of ponds, &c. Stems commonly in bunches, erect, downy, subdivided near the top. Leaves lanceolate, tapering to a very acute point, downy on the under side. Umbels many, small, on downy peduncles. Flowers purple.—July.—Perennial.

The bark is very strong and fibrous.

ASCLEPIAS TUBEROSA. *L.* *Butterfly weed. Pleurisy root.*

Leaves alternate, lanceolate; stem divaricate, hairy. ***L.***

Syn. ASCLEPIAS DECUMBENS. Walt.

Stem upright or decumbent, hairy, branching at top. Leaves scattered, oblong, or lanceolate, hairy. Umbels terminal. Flowers deep orange colour.—Grows at Woburn, and is frequent in the interior of the state.—July.—Perennial.

The root of this plant has considerable medicinal activity. See Dr. Barton's Materia Medica of the United States.

ASCLEPIAS VERTICILLATA. *L.* *Whorled Asclepias.*

Leaves revolute, linear, whorled; stem erect. ***L.***

This very neat species is altogether different in its habit from those already described. Stem slender, marked with downy stripes. Leaves in whorls of five or six, linear, revolute at the margin, paler beneath. Umbels several, small, coming out from among the upper whorls. Flowers white.—On a hill near the Dedham turnpike, Roxbury.—July.—Perennial.

76. GENTIANA.

GENTIANA SAPONARIA. *L.* *Soapwort Gentian.*

Corollas five cleft, companulate, inflated, whorled; leaves ovate lanceolate, three nerved. ***Froel.***

A very fine plant, distinguished by its large purple flowers which are so nearly closed at the top as to resemble buds. Stem erect, simple, smooth. Leaves opposite, oval-lanceolate, acuminate, smooth, three and sometimes five nerved. Flowers sessile in bunches at the top, and frequently on the sides in the axils of the upper leaves. Corolla bell shaped, purple and white, slightly five cleft, its segments subdivided and folded together so as to close the mouth.—Found in moist woods, Cambridge.—September, October.

GENTIANA CRINITA. *Froel.* *Fringed Gentian.*

Corollas four cleft, the segments cut-ciliate; leaves lanceolate, acute; stem erect, round, ***Froel.***

This gentian is exceeded by few native plants in the delicacy and beauty of its flowers. The stems are divided toward the top into several erect branches. The leaves are opposite, ovate-lanceolate, smaller than in the last species. Flowers erect, on the ends of the branches, remote from the leaves. The stamens are four in number, as are the segments of the calyx and corolla. The segments of the corolla are of a deep purple and fringed on the end.—On the Concord turnpike.—September, October.

77. CUSCUTA.

CUSCUTA AMERICANA. *L.* *Dodder.*

Flowers peduncled, umbellate, five cleft. ***Willd.***

A small, yellowish, leafless vine, twining round other plants,

which it penetrates with lateral roots so as to derive nourishment from their juices. Its small umbels of flowers appear in June and July.

78. SALSOLA.

SALSOLA CAROLINIANA. *Mich.* *American Saltwort.*

Herbaceous, decumbent; leaves subulate, spinous, smooth, dilated and entire at base; calyx axillary, margined.

A stiff, prickly plant of the sea shore. Stems much branched, angular, smooth. Leaves numerous, short, rigid, awl-shaped and very acute, spreading, smooth and entire, dilated at base, sessile. The lower leaves are deciduous, so that when the fruit is ripe, only the floral leaves remain. These are three in number to each flower, resembling the other leaves, but shorter, their base dilated and perfectly entire, not repand as in Salsola Kali. The calyx is externally compressed into a broad, membranous margin, flattish, but rising in the centre. Seed enclosed in the calyx, cockle-shaped from its spiral cotyledons.—Salt marshes.—July, August.

Plants of this genus are used in the manufacture of Soda.

79. CHENOPODIUM.

CHENOPODIUM ALBUM. *L.* *White Goosefoot. Hog-weed.*

Leaves rhomboid-ovate, eroded, entire behind, the upper ones oblong, entire; seeds smooth. *Sm.*

A common weed in cultivated, and waste ground. Stem channelled, branched; leaves mealy, the lower ones unequally toothed above, the upper ones smaller, entire. Bunches of flowers erect, green or mealy.—July.—Annual.

CHENOPODIUM RUBRUM. *L.* *Red Goosefoot.*

Leaves triangular, approaching to rhomboid; deeply toothed, and somewhat sinuated; clusters upright, compound, leafy. *Sm.*

More green, fleshy, and compact than the last. Leaves sinuated, tapering at base. Clusters of flowers, close, interspersed with small leaves.—Among rubbish, especially in low ground. —Annual.

CHENOPODIUM HYBRIDUM. *L.* *Tall Goosefoot.*

Leaves cordate, angular-toothed, acuminate; racemes branched, somewhat cymose, divaricate, leafless. *Sm.*

A tall species with large leaves. Stem slender, upright. Leaves spreading, bright green, with a few large teeth on each side, heart shaped at base, tapering into a long point. Clusters compound, branching, open, remote from leaves.—Wastes and rubbish.—July.—Annual.

CHENOPODIUM BOTRYS. *L.* *Cut leaved Goosefoot.*

Leaves oblong, sinuated; racemes naked, many cleft. *L.*

Stem short, branching, somewhat rigid, leafy. Leaves petioled, oblong, deeply sinuated, slightly pubescent. Flowers in numerous short axillary racemes, covering the ends of the branches, and giving them the appearance of long leafy spikes. The whole plant has a strong, peculiar smell when bruised.—Woods, Brighton.—Annual.

80. ULMUS.

ULMUS AMERICANA. *L.* *Common Elm.*

Leaves equally serrate, unequal at the base. *L.*

This stately tree is distinguished at sight from the cultivated English elms by its long pendulous branches. It also loses its leaves in autumn several weeks sooner. The flowers, which appear in April, have commonly from six to eight stamens. They are small, of a dull purple colour, and grow in bunches on slender footstalks. The seeds are contained in a flat, oval, winged capsule or samara, which is ciliated at the edge. The leaves grow alternately on opposite sides of the branches; they are more smooth and more uniformly serrated than those of the English elm. The wood of the elm is tough, and principally used to form the naves or hubbs of wheels.

81. HYDROCOTYLE.

Hydrocotyle Americana. *L.* *Pennywort.*

Leaves reniform, somewhat lobed, crenate, *L.*

A small plant found in moist ground under the shade of bushes, &c. Stem creeping. Leaves kidney shaped, doubly crenate, light green, very smooth and thin. Flowers minute, in very small umbels or bunches, sessile.—July.—Perennial.

82. SANICULA.

Sanicula Marilandica. *L.* *Sanicle.*

Barren flowers on peduncles, perfect ones sessile. *Gr.*

Stem upright, smooth, divided into a few erect branches. Leaves divided somewhat in a pedate manner, acutely serrate. Umbels simple, few flowered, the barren flowers on short peduncles, the perfect or fruitful ones sessile. Seeds furnished with hooked bristles.—About thickets in low ground.

83. HERACLEUM.

Heracleum lanatum. *Mich.* *Cow parsnep.*

Leaves ternate, woolly underneath, leafets pe-

tioled roundish-heart shaped, lobed; fruit orbicular. *Mich. abr.*

One of the largest of our umbelliferous plants. Petioles and nerves of the leaves channelled, bristly. Leafets large, woolly on the under side, deeply cut into lobes, which are again cut, and unequally serrate. Umbels radiate, half a foot in diameter, flat. Flowers white. Seeds thin, round-oval, emarginate, marked with three short lines.—South Boston, Dorchester. —June.—Perennial.

84. CONIUM.

CONIUM MACULATUM. *L.* *Common Hemlock.*

Seeds unarmed, striate, stem much branched, shining, spotted. *Sm.*

A well known poisonous plant. Stem from three to six feet high, round, spotted. Leaves three times pinnate, of a shining green. General involucre of five or seven lanceolate, reflected leafets. Partial involucre of three or four on the outer side of the footstalk. Petals five, oval, curled in at their points. Fruit oval, striate, the ribs often slightly wrinkled.—Road sides, and waste ground.—June, July.

The inspissated juice of this plant is extensively used in medicine. Care must be taken to distinguish it from a species of Æthusa, nearly allied to Æ. cynapium, (perhaps a variety) which grows with, and very much resembles it. The Æthusa is a smaller plant, has no general involucre, and its partial ones consist of three long pendulous leafets. Their taste is different, that of hemlock being the most nauseous.

85. ANGELICA.

ANGELICA TRIQUINATA. *Mich.* *Common Angelica.*

Petiole three parted, its divisions pinnate-five leaved; leafets cut-toothed, of the terminal leafets

the odd one rhomboid, sessile, the lateral ones decursive. ***Mich.***

A very large umbellate plant, well known for its fine aromatic flavour. Stem large, five or six feet high, petioles with very large swelling stipulæ. Leaves smooth, decompound, the three terminal leafets appearing as one. Seeds oblong-hemispherical, three winged on the back. Cambridge, meadows.—June.

86. SIUM.

SIUM LALIFOLIUM. *L.* *Water parsnep.*

Leaves pinnate; leafets oblong-lanceolate, equally serrate. ***Sm.***

A tall aquatic plant common in ditches and muddy brooks. Stem erect, hollow, smooth, with deep furrows and sharp, prominent angles. Leaves pinnate; leafets in half a dozen pairs, with an odd one, ovate-lanceolate, equally serrate, or laciniated if under water. Umbels solitary, mostly terminal. General involucre of many leaves lanceolate, and occasionally serrate. Partial involucres small. Flowers white. Fruit ovate, striated. —From July to September.—Perennial.

87. SISON.

SISON CANADENSE. *L.* *Honewort.*

Leaves ternate; umbels irregular.

Stem smooth. Leaves in threes, the radical ones cleft, those of the stem doubly toothed, rhomboidal, shining. Umbel unequal, of four rays with no general involucre. Partial umbels unequal, close, few flowered with a minute involucre. Flowers small, white. Seeds smooth, oblong.—Lynn beach island. —July.

88. CICUTA.

CICUTA MACULATA. *L.* *Water hemlock. Snakeweed.*

Serratures of the leaves mucronate, stipules extending up the petioles, two-lobed at top. *Mill.*

Stem three or four feet high, commonly purplish. Leaves triply pinnate. Leafets oblong-lanceolate, pointed, serrate, the upper ones sessile, lower ones shortly petioled, the serratures finely mucronate. Umbels of moderate size; general involucre none, partial one of many leaves.—In wet meadows.—June and after.—Perennial.

TRIGYNIA.

89. VIBURNUM.

VIBURNUM LENTAGO. *L.* *Pear leaved Viburnum.*

Leaves broad-ovate, acuminate, sharply serrate, petioles margined, curled. *Ait.*

A tall shrub in low gronnds. Leaves very finely serrate, the serratures sharp, a little turned inward. Petiolès with a membranous margin, widest in the upper leaves, waved or curled. Flowers in cymes, as are all the subsequent species. Fruit pleasant to the taste.—South Boston, Cambridge.—June.

VIBURNUM NUDUM. *L.* *Naked Viburnum.*

Leaves oval, a little wrinkled, revolute at the margin, obsoletely crenulate. *Ait.*

A shrub of low grounds like the last. Leaves smooth, tapering to a bluntish point, entire or very slightly crenate, reflected at the margin. Cymes naked, without bractes or involucres. The leaves turn black in drying.—Cambridgeport.—June.

VIBURNUM DENTATUM. *L.* *Arrow wood.*

Leaves ovate, dentate, serrate, plaited. *L.*

A more common shrub than the foregoing. The shoots are slender and very straight, from whence it has received the name of Arrow wood. Leaves roundish or oval, very regularly toothed, the veins parallel and prominent underneath.—Moist woods.—June, July.

VIBURNUM ACERIFOLIUM. *L.* *Maple Viburnum.*

Leaves three lobed, acuminate, sharply serrate; petioles without glands, hairy. ***Willd.***

Leaves rounded or hearted at base, broad, divided into three lobes, with large teeth, very soft with minute down underneath. Cymes on long peduncles.—Woods, Roxbury.—June, July.

The different species of Viburnum are fine flowering shrubs, and with the Elder, next described, constitute a principal ornament of our woods and thickets during the first part of summer.

90. SAMBUCUS.

SAMBUCUS CANADENSIS. *L.* *Common Elder.*

Cymes five parted; leaves nearly bipinnate, stem shrubby. ***Willd.***

Michaux says he could observe no difference between this species and the *Sambucus nigra* of Europe, except in size, the latter being a tree, the former a shrub. Leaves pinnate, the lower leafets double or ternate, and all of them oblong-oval, sharply serrate, tapering to a very long and acute point. Flowers white; berries blackish; both considered medicinal.—June, July.

91. RHUS.

RHUS GLABRUM. *L.* *Smooth Sumach.*

Glabrous; leaves pinnate, of many pairs, leafets

lance-oblong, serrate, whitish underneath. ***Mich. abr.***

A common species of Sumach found about fences and borders of fields. Petioles and leaves unarmed and smooth. The flowers are dicœcious. The leaves of this and the two following species are astringent and used in tanning. Berries crimson, astringent, and acid.—June, July.

RHUS TYPHINUM. *L.* *Stag's horn or Velvet Sumach.*

Branches and petioles hairy; leaves pinnate, of many pairs, hairy underneath; leafets lance-oblong, sharply serrate.

A larger species than the last; its leafstalks and last years branches covered with thick bristly hair. Bunches of berries crowded, purple, velvet like. I believe this species to be dicœcious.—In low ground.—June.

The bark and leaves give out a milky juice on being broken, both in this and the other species.

RHUS COPALLINUM. *L.* *Mountain or Dwarf Sumach.*

Leaves pinnate, entire; petioles membranous, jointed. ***L.***

A smaller shrub than the preceding. The young branches and petioles are downy. Leafets oval-lanceolate, acute, entire. Between each pair the petiole spreads out into a broad leafy expansion, contracted at the insertion of the leafets. Flowers dicœcious.

RHUS VERNIX. *L.* *Poison dogwood. Swamp Sumach.*

Quite glabrous; leaves pinnate, of many pairs; leafets oval, abruptly acuminate, entire; panicle lax; flowers dicœcious; fruit smooth. ***Mich. abr.***

Grows in bunches in wet swamps, where its fine smooth

leaves give it the air of a tropical shrub or tree. Petioles long, roundish, smooth; the partial ones very short. Leafets oval, terminating in a short point. Peduncle long, smooth, supporting a loose panicle of small flowers, which are dicœcious. Berries white.

The effluvium of this shrub is a violent poison to certain constitutions, producing in them a distressing cutaneous eruption, when it is handled or even approached. On others, and I believe on a majority, it exerts no influence. The leaves have been rubbed, chewed, and swallowed without injury. Their taste is simply herbaceous and astringent, and does not indicate any extraordinary quality.

In Japan a fine varnish is said to be prepared from the juice of the *Rhus vernix*, a tree, whose identity with the present, is still a subject of dispute.

RHUS RADICANS. *L.* *Poison Ivy.*

Leaves ternate; leafets petioled, ovate, naked, entire; stem rooting. *L.*

A hardy climber, frequently seen running up trees to a great height, supporting itself by lateral roots, and becoming nearly buried in their bark. Leaves in threes, large, smooth, roundish, pointed. Racemes sessile, mostly about the axils of the leaves. Flowers dicœcious. Berries white.—Poisonous in a less degree than the last.—The juice stains a black colour.—June.

92. SAROTHRA.

SAROTHRA GENTIANOIDES. *L.* *Pine weed.*

Syn. *HYPERICUM SAROTHRA. Mich.*

A small, erect, branching plant. Leaves appressed, scale-like, so small, that the plant appears leafless. Branches numerous, subdivided, erect. Flowers small, yellow, with from five to ten stamens and three styles. Capsule oblong, coloured. —On sandy soils exposed to the sun.—July, August.

PENTAGYNIA.

93. ARALIA.

ARALIA NUDICAULIS. *L.* *Wild Sarsaparilla.*

Stemless, leaves decompound, scape leafless. *Willd.*

A well known aromatic root. It has no stem unles the termination of the root be so considered. Leaves on long stalks, subdivided into three times three, or three times five leafets, which are oval and serrate. The scape rises between the leaf stalks, and supports a few simple umbels.—Woods and thickets.—May, June.—Perennial.

ARALIA RACEMOSA. *L.* *Pettymorrel. Spikenard.*

Stem herbaceous, smooth; leaves decompound; peduncles axillary, branching, umbelled. *Willd.*

Tall and irregulaly branched. Stem smooth, dark green or red. Leafets large, ovate or heart-shaped, serrate. Flowers in small umbels, which are again arranged in branching racemes, from the axils or forks of the stem.—In woods.—June, July.—

It is aromatic and in high estimation with people of the country.

ARALIA HISPIDA. *Mich.* *Bristly Aralia.*

Stem shrubby at base, hispid; leaves twice pinnate; leafets cut serrate; umbels on long peduncles. *Mich. abr.*

The lower part of the stem endures the winter, and has a shrubby appearance, but most of the herb is annual. The stem is set with thick and stiff bristles at the base. Leafets much smaller than in the preceding, sharply and unequally serrate, ending in a long point. Umbels several, on long peduncles.—Woods, Cambridgeport.—June.

94. DROSERA.

DROSERA ROTUNDIFOLIA. *L.* *Round leaved Sun-dew.*

Leaves orbicular, radical, depressed; petioles hairy; scape bearing a simple raceme. *Sm.*

The thick glandular hairs, which cover the leaves of this and other species, will readily distinguish them from other plants. Leaves small, round, spreading on the ground in a flat circle. Scape smooth, bearing a one-rowed, curved raceme of small white flowers.—Wet, boggy land.—July, August.

95. STATICE.

STATICE LIMONIUM. *L.* *Marsh rosemary.*

Scape panicled, round; leaves smooth, destitute of nerves, tipped with a small point. *Sm.*

Very common on our salt marshes, flowering in June and after. Leaves obovate, or spatulate, waved at the edge, very smooth and entire, nerveless, mucronated at the tip. Scape alternately branched, the branches ascending, somewhat corymbed. Flowers numerous, erect, small, blue.—Perennial.

The root is strongly astringent, and with us is an officinal article of considerable consumption.

Class VI. HEXANDRIA. *Six stamens.*

Order I. *MONOGYNIA. One style.*

96. BERBERIS. Calyx six leaved, inferior; corolla six petalled; two glands at the base of each petal; berry two seeded.

97. PRINOS. Calyx six cleft, inferior; corolla six parted, wheel shaped; berry six seeded.

98. PONTEDERIA. Corolla inferior, ringent, six cleft; stamens inserted three in the tip, and three in the tube of the corolla; capsule three celled.

99. HYPOXIS. Spathe two valved; corolla superior, six parted; capsule narrower at the base.

100. CONVALLARIA. Calyx none: corolla six cleft, inferior; stigma three sided; berry three celled.

101. UVULARIA. Calyx none; corolla inferior, petals six, erect, with a nectariferous cavity at their base; stamens very short.

102. ERYTHRONIUM. Calyx none; corolla inferior, six petalled; the three inner petals with a callous prominence on each edge near the base.

103. LILIUM. Calyx none; corolla inferior, six petalled, the petals with a longitudinal groove from the middle to the base.

104. ACORUS. Spadix cylindrical, covered with flowers; corolla six petalled; style none; capsule three celled.

105. JUNCUS. Calyx six leaved, inferior, permanent; corolla none; capsule three valved; seeds numerous; stigmas three.

Order III. *TRIGYNIA. Three styles.*

106. MEDEOLA. Calyx none; corolla inferior six parted, revolute; berry three seeded.

107. TRILLIUM. Calyx three leaved, inferior; corolla three petalled; berry three celled.

108. TRIGLOCHIN. Calyx three leaved, inferior; corolla three leaved, resembling the calyx; styles none; capsule bursting at the base; seeds solitary.

109. RUMEX. Calyx three leaved inferior; petals three connivent; stigma many cleft; seed one, triangular, naked.

Order V. *POLYGYNIA. Many styles.*

110. ALISMA. Calyx three leaved; corolla three petalled; capsules numerous, clustered, one seeded.

HEXANDRIA.

MONOGYNIA.

96. BERBERIS.

BERBERIS VULGARIS. *L.* *Barberry bush.*

Flowers in racemes; spines three forked; serratures of leaves terminated by soft bristles. *Sm.*

Few shrubs are better known or more common by road sides and fences, in gravelly soils. Branches dotted and armed with triple thorns. Leaves inversely ovate, serrate, the teeth and point ending in short bristles. The yellow flowers appear in June in hanging clusters; succeeded by oblong, acid berries of a deep red colour.

A very remarkable degree of irritability, not exceeded by the sensitive plant, exists in the flowers of the Barberry. When these are fully expanded, the stamens are found spread out on the inner side of the corolla. In this situation if the inside of the filament be touched with a pin or straw, it instantly contracts and throws the anther violently against the stigma. This fact which has been particularly described by Dr. Smith in the English Barberry, is not less remarkable and distinct in the American variety of the shrub.

It is a commonly received opinion, both here and in Europe, that the barberry is injurious to cultivated grain. Wheat, rye, &c. growing in its neighbourhood, are said to be blighted, But some distinguished philosophic agriculturalists, among whom are Duhamel and Broussonet, have assured us that the opinion is without foundation.—May not the supposed fault belong to the peculiar soil and situation which the barberry frequents?

97. PRINOS.

PRINOS VERTICILLATUS. *L.* *Black Alder.*

Leaves oval, serrate, acuminate, hairy on the nerves beneath.

Syn. *PRINOS GRONOVII. Mich.*

Black alder or Winter berry is readily discovered in woods and swamps after the leaves have fallen, by its crowded scarlet berries which remain on the small branches. It is a large shrub, with small, white, six parted flowers, in lateral or axillary bunches, appearing in June and July.—The bark is considered medicinal.

PRINOS GLABER. *L.* *Evergreen Winter berry.*

Leaves wedge-lanceolate, glabrous, serrate at tip.

Distinguished from the former by its smooth coriaceous, evergreen leaves, which are of a bluntish lanceolate form, with a few small remote teeth at the end. Flowers axillary.—Swamps.—June, July.

98. PONTEDERIA.

PONTEDERIA CORDATA. *L.* *Pickerel-weed.*

Leaves heart shaped, flowers spiked. *L.*

During the month of July, the tall blue spikes of Pontederia are very conspicuous on the borders of ponds and rivers of deep water and muddy bottoms. Stem erect, fleshy, cylindrical. Leaves long, heart shaped, very smooth, with convergent nerves. Stem leaf sheathing at the base of its stalk. Flowers in a cylindrical spike, proceeding from a short spathe. Corollas irregular, somewhat labiate.—Perennial.

99. HYPOXIS.

HYPOXIS ERECTA. *L.* *Yellow Bethlehem star.*

*** Hairy; scape about four flowered, shorter than the leaves; leaves linear-lanceolate; peduncles twice as long as the flower.**

Syn. HYPOXIS CAROLINIANA. Mich.

The yellow, star-like flowers of this plant appear among the grass in pastures, in June and after. Root bulbous. Leaves grass like, hairy. Scape slender, hairy, divided at top into about four peduncles, with subulate bractes or spathes at their base. Corolla wheel shaped, of six lanceolate petals or segments, hairy on the outside. Perennial.

100. CONVALLARIA.

CONVALLARIA BIFOLIA. *L.* *Two leaved Solomon's seal.*

Stem two or three leaved, leaves heart shaped, flowers tetrandrous. *Mich.*

The creeping roots of this little plant cause it to spread extensively in the moist situations where it grows. Its stem is furnished with two or three smooth, thin, delicate leaves, oblong heart shaped and sessile. Flowers white, in a short erect cluster. Corolla four cleft; stamens four. The unripe berries are white and spotted, a circumstance said to be common to all the species.—Flowers in May.—Perennial.

CONVALLARIA RACEMOSA. *L.* *Clustered Solomon's seal.*

Leaves alternate, nearly sessile, oval, acuminate; raceme terminal, compound.

A large species, every part of it covered with fine down. Leaves alternate oblong, large, tapering to a long point, their base narrowed into a sort of petiole. The stem terminates in a

branching raceme of white or greenish flowers. Corollas small, nearly rotate. In low ground.—June.—Perennial.

CONVALLARIA MULTIFLORA. *L. Many flowered Solomon's seal.*

Leaves alternate, clasping; stem round; peduncles axillary, many flowered. *L.*

A smaller plant than the preceding species. Stem about two feet high, smooth, round, simple, nodding at top. Leaves alternate, oval, nerved, slightly clasping at base. Flower stalks axillary, drooping, branched, supporting several pendulous white flowers. Corollas long, funnel shaped, somewhat cylindrical, six cleft.—About fences and shady places.—May, June. —Perennial.

101. UVULARIA.

UVULARIA PERFOLIATA. *L.* *Perfoliate Bellwort.*

Leaves perfoliate; segments of the corolla granular within, capsule truncated. *Mich.*

Has the habit of the last genus. Stem smooth, round, running through the leaves. Leaves oval, smooth, perforated by the stem near their base, furnishing a good example of the perfoliate leaf. Flowers pendulous, yellow, of six petals or segments, bell shaped. Capsule three cornered, appearing as if cut off in the middle.—Woods, Watertown, Brooklyn.—May.—Perennial.

UVULARIA SESSILIFOLIA. *L.* *Sessile leaved Bellwort.*

Leaves sessile, lance-oval, glaucous underneath; capsule pedunculated; ovate. *Pers.*

Stem slender, smooth, dividing at top into two branches, one bearing only leaves, the other leaves and a flower. The leaves are alternate, thin, smooth, paler underneath. The flower pale

yellow, on a slender axillary peduncle. Capsule ovate, contracted at base.—Woods, Brooklyn.—May.—Perennial.

102. ERYTHRONIUM.

ERYTHRONIUM AMERICANUM. *Bot. Mag.* *Dog's tooth violet.*

Leaves involute at the point, style club shaped.

Syn. *ERYTHRONIUM LONGIFOLIUM. Poir.*
ERYTHRONIUM DENS CANIS. Mich.

A delicate liliaceous plant. Root bulbous, commonly situated deep in the ground. Leaves two, opposite, lanceolate, contracted at the point, smooth and shining, their surface clouded with irregular spots. Stalk smooth, supporting a single, drooping, yellow flower. Petals six, obtuse, three of them external, the three inner ones with a slight protuberance on each side of the base. Style thickening upward. Germ obovate.—Woods, Brighton.—May.—Perennial.

103. LILIUM.

LILIUM CANADENSE. *L.* *Common yellow lily.*

Leaves in whorls; flowers terminal, drooping, petals spreading.

A great portion of our meadows are embellished with the flowers of this lily in the first part of summer. Stem green, varying in height from one to three feet, with lanceolate leaves surrounding it in distant whorls. Flowers sometimes one, and frequently three on a plant, bell shaped, pendulous, yellow, spotted inside; petals lanceolate, turned outward, but hardly reflexed.—June, July.—Perennial.

LILIUM PHILADELPHICUM. *L.* *Common red lily.*

Leaves in whorls; flowers erect; corolla bell shaped, petals with claws. *L.*

The red lily is a less shewy, but equally beautiful species with the last. It frequents a drier soil, and is commonly found about the margins of fields, among bushes, &c. Leaves whorled, a few sometimes scattered. Flowers one, two, or three, upright, of a dark vermillion colour, spotted. The petals are supported on long claws, which gives the flower an open appearance.—June, July.—Perennial.

104. ACORUS.

ACORUS CALAMUS. *L.* *Sweet flag.*

Summit of the stalk above the flowers very long and leaf like. ***Sm.***

Sweet flag root is an officinal article in considerable estimation. At times when the plant is not in flower, the aromatic flavour of the root will readily distinguish it from the other species of flag, a name indiscriminately applied here to plants with sword shaped leaves, as Iris, Typha, &c. When in flower, the long, round, solitary spadix, projecting from the side of an apparent leaf, is a sufficient mark. The spadix is closely covered with small, green flowers with six petals, and as many stamens.—Meadows.—June, July.—Perennial.

105. JUNCUS.

JUNCUS EFFUSUS. *L.* *Soft rush. Bulrush.*

Stem naked, straight; panicle lateral, loose, thrice compounded; capsules obtuse. ***Sm.***

Found every where in moist land, growing commonly in bunches. Stems perfectly simple, smooth, round, and leafless, sheathed at the base and filled with spongy pith. Panicle proceeding from a fissure in the side of the stem, much branched, and bearing many small green flowers.—June, July.—Perennial.

JUNCUS CAMPESTRIS. *L.* *Field rush.*

Stem leafy. Leaves flat, hairy; spikes terminal, sessile, or pedunculated; capsules obtuse. ***Sm.***

Hardly half a foot high in dry ground, but in wet situations much taller. Stem upright, round, leafy. Leaves short, grass like, flat, acute, the edges fringed with fine, loose hairs. Spikes terminal, umbelled, most of them on peduncles, irregular ovate, obtuse, erect or nodding. Calyx leaves lanceolate, acute. Capsules inversely ovate, obtuse, shorter than the calyx.—May.—Perennial.

JUNCUS TENUIS. *Willd.* *Slender rush.*

Stem roundish, undivided; leaves linear, channelled; corymb terminal; leaves of the calyx acuminate, larger than the obtuse, three sided capsule. ***Willd.***

A small, hardy species, common about foot paths and road sides. Stem roundish, leafy at base. Leaves slender, channelled on the upper side. Corymb or cyme terminal, unequal, invested with a long, leafy involucre. Capsule obtuse, a little shorter than the calyx.—June.—Perennial.

JUNCUS POLYCEPHALOS. *Mich.* *Many headed rush.*

Stem few leaved, erect; leaves somewhat knotty; heads round, many flowered, panicled; calyxes linear; stamens three. ***Mich. abr.***

Syn. *JUNCUS ECHINATUS. Muhl.*

Common in meadows and low ground. Stem erect, firm, round, smooth. Leaves round, smooth, interrupted with numerous transverse partitions or joints. Heads resembling small burrs, sessile and pedunculated, in a proliferous panicle

or umbel, with very unequal branches. Calyx leaves crowded, linear-lanceolate, very acute.—Perennial.

TRIGYNIA.

106. MEDEOLA.

MEDEOLA VIRGINICA. *L.* *Cucumber root.*

Leaves in whorls.

Few plants exceed this in geometrical regularity of structure and appearance. The stem is erect, smooth, and commonly invested with loose tufts of cotton-like down. The leaves are in two whorls, the lowermost a few inches from the top, consisting of about seven or eight broad lanceolate leaves, the uppermost of three, and rarely four ovate ones. The flowers are terminal, and bend down through the interstices of the upper leaves. Petals greenish white, revolute. Styles three, long, reflexed. The root is tuberous, with a flavour resembling the cucumber.—In low woods and swamps.—June, July.—Perennial.

107. TRILLIUM.

TRILLIUM CERNUUM. *L.* *Nodding Trillium.*

Flower on a footstalk, drooping. ***Willd.***

This is the only species I have observed in the neighbourhood of Boston. Leaves three, large, roundish, or rhomboid, pointed. Flower terminal, from the bosom of the leaves, bending down so as to be sheltered beneath them. Calyx leaves three. Petals three, alternate with the calyx leaves, nearly white, reflexed. Stigmas three, recurved.—In shady thickets. —May, June.—Perennial.

108. TRIGLOCHIN.

TRIGLOCHIN MARITIMUM. *L.* *Sea arrow grass.*

Capsule six celled, grooved, ovate. ***Willd.***

The leaves of this plant are rush-like, smooth, fleshy, flexible, and semicylindrical. They have a sweetish, not unpleasant taste. Stalk solitary, bearing a long, dense spike of greenish flowers on very short pedicels. They have six leaves, three of which may pass for calyx and three for petals. Anthers nearly sessile.—Salt marshes and ditches.—June.—Perennial.

The cultivation of this plant for cattle has been recommended.

109. RUMEX.

RUMEX CRISPUS. *L.* *Curled Dock.*

Calyx valves ovate, entire, all bearing grains; leaves lanceolate, waved, acute.

Root fusiform. Stem furrowed, smooth. Leaves lanceolate, rather acute, waved and curled on the margin. Racemes of half whorls, leafy towards the base. Valves enclosing the seed heart-shaped, reticulated, very slightly serrate or repand on the margin, each bearing a grain, of which one is much larger than the other two.—Rubbish and cultivated grounds.—June.—Perennial.

RUMEX OBTUSIFOLIUS. *L.* *Broad leaved Dock.*

Valves toothed, one chiefly graniferous; root leaves heart-shaped, obtuse; stem roughish. *Sm.*

Grows in the same places as the last, but is somewhat later in its appearance. Root more divided. Stem furrowed, rough near the top. Leaves large, oblong, heart-shaped, obtuse at the end; the petiole and midrib often red on the upper side. Calyx leaves heart-shaped, reticulated, furnished with long, subulate teeth, one only bearing a full, distinct grain.—July.—Perennial.

These two species, originally from Europe, are among our most troublesome weeds.

RUMEX BRITANNICA. *L.* *Yellow rooted water Dock.*

Valves very entire, all of them graniferous; leaves lanceolate with obsolete sheaths.

A tall species growing in deep mud in watery situations. Leaves broad-lanceolate, smooth and even. Stem furrowed, surrounded above the joints with torn sheaths, a character which distinguishes it from Rumex verticillatus, another aquatic species with long tubular sheaths. Valves of the calyx large, heart-shaped, entire, each bearing a grain.—July.—Perennial.

RUMEX ACETOSELLA. *L.* *Sorrel. Sheep's sorrel.*

Flowers dicœcious, leaves lanceolate, hastate; calyx valves without grains.

A common and unprofitable intruder into every species of ground, but particularly such as are dry and sandy. The root leaves furnish a good example of the halberd shape or hastate form. Flowers in panicled racemes, small, with stamens and styles on distinct plants. Valves ovate, entire, destitute of grains. The acid properties of the plant are well known.—May.—Perennial.

POLYGYNIA.

110. ALISMA.

ALISMA PLANTAGO. *L.* *Water plantain.*

Leaves ovate, acute, capsules obtusely three cornered. *Sm.*

Common in small ponds and ditches. Leaves radical, petioled, ovate, acute, smooth, nerved, entire. Panicle decompound, its branches given off in whorls with bractes. Flowers with three calyx leaves and three deciduous petals of a purplish white. Capsules three cornered, obtuse.—June, July.—Perennial.

Class VII. HEPTANDRIA. *Seven stamens.*

Order I. *MONOGYNIA. One style.*

111. TRIENTALIS. Calyx seven leaved; corolla seven parted, equal; berry one celled, juiceless.

HEPTANDRIA.

MONOGYNIA.

111. TRIENTALIS.

TRIENTALIS EUROPÆA. *L.* ***Chickweed wintergreen.***

A plant seldom exceeding half a foot in height, having its leaves chiefly in a tuft or whorl at the top, with one or more white star-like blossoms above. Leaves lanceolate, entire, smooth, pointed. Flowers on filiform peduncles. The number of stamens and divisions of the calyx and corolla is commonly seven, but often varies to six or eight.—In low woods, particularly among the pine trees on Craigie's road.—May, June.—Perennial.

Class VIII. OCTANDRIA. *Eight stamens.*

Order I. *MONOGYNIA. One style.*

112. EPILOBIUM. Calyx four cleft, tubular, superior; corolla four petalled; capsule oblong; seeds feathered.

113. ŒNOTHERA. Calyx four cleft, tubular, superior; corolla four petalled; capsule four celled, four valved; seeds naked.

114. RHEXIA. Calyx four cleft, inferior; corolla four petalled; anthers curved; capsule four celled, in the body of the calyx.

115. VACCINIUM. Calyx superior, four toothed; corolla monopetalous; stamens inserted on the receptacle; berry four celled, many seeded.

Order III. *TRIGYNIA. Three styles.*

116. POLYGONUM. Calyx five parted, resembling a corolla; corolla none; seed one, angular, inclosed in the calyx; stamens and pistils irregular in number.

OCTANDRIA.

MONOGYNIA.

112. EPILOBIUM.

EPILOBIUM ANGUSTIFOLIUM. *L.* *Spiked Willow herb.*

Leaves scattered, linear-lanceolate, entire, veiny; flowers unequal. *Ait.*

Syn. *EPILOBIUM SPICATUM. Pers. Muhl.*

A tall plant bearing a profusion of blue flowers. Stem round, erect, with alternate branches near the top. Leaves narrow, lanceolate, smooth, glaucous underneath, nearly sessile. Racemes terminal, leafless. Flowers on footstalks; petals four, irregular, standing on the long, whitish, or glaucous germ. When the pods are opening the plant appears covered with the down of the seeds.—In woods and low grounds. A large quantity grows near Brighton new road.—June, July.—Perennial.

EPILOBIUM COLORATUM. *Muhl.* *Coloured Willow herb.*

Leaves lanceolate, serrulate, petioled, opposite, the upper ones alternate; stem round, pubescent.

A more branching plant than the foregoing. Stem erect, round, with opposite pubescent branches. Leaves lanceolate, glabrous, their veins often of a red colour, on short petioles, the bases of which unite round the stem in an elevated line. Flowers axillary, purple, regular, with very long, linear germs.—Meadows and swamps.—July, August.—Perennial.

113. ŒNOTHERA.

ŒNOTHERA BIENNIS. *L.* *Tree primrose.*

Leaves ovate-lanceolate, flat; stem a little rug-

ged and villous; stamens shorter than the corolla. *Willd.*

The large, yellow flowers of this plant are frequently seen overtopping the fences by which they grow, during most of the summer. In the country it is vulgarly known by the name of *Scabish*, a corruption probably of *Scabious*, from which however it is a very different plant. Stem from three to five feet high, rough, hairy, and branching. Root leaves petioled; stem leaves sessile; both pubescent, slightly toothed. Flowers solitary, axillary. Germ sessile, four grooved, surmounted by the long, tubular calyx, which divides into four reflexed segments; petals large, roundish, sometimes emarginate. This plant, originally American, is now naturalized, and very common throughout Europe.—Biennial.

ŒNOTHERA PUMILA. *L.* *Dwarf tree primrose.*

Leaves lanceolate, very entire, obtuse; capsules slightly pedicelled, elliptic-obovate, angular. *Willd.*

Stem oblique at base, ascending, round, slender, about a foot high. Leaves sessile, blunt. Flowers small, nearly sessile, in a leafy spike. Petals inversely heart-shaped. Stamens shorter than the corolla. Capsules inversely ovate, with eight angles.—Pastures.—Perennial.

114. RHEXIA.

RHEXIA VIRGINICA. *L.* *Virginian Rhexia.*

Stem with four winged angles; leaves sessile, oval-lanceolate, serrate-ciliate, calyx with glandular hairs.

Stem square with membranous angles. Leaves opposite, oval, three nerved, with scattered hairs on both sides and on the

margin. Peduncles axillary and terminal. Calyx urn-shaped, hairy; petals purple and finely contrasted with the long, crooked, yellow anthers.—Low grounds.—July, August.—Perennial.

115. VACCINIUM.

VACCINIUM MACROCARPON. *Ait.* *Craneberry.*

Leaves evergreen, entire, oval-oblong, obtuse; stems filiform, creeping. *Ait. abr.*

Syn. VACCINIUM OXYCOCCUS oblongifolius. Mich.

The craneberry vine spreads in large beds at the bottom of the grass in turfy meadows. Stems slender, creeping. Leaves numerous, small, dark above, whitish underneath. Flower stalks axillary, slender; corollas white, their segments long and reflexed. Anthers projecting. The fruit is large, and esteemed superior to the European craneberry.—Perennial.

VACCINIUM RESINOSUM. *L.* *Black Whortleberry or Huckleberry.*

Racemes bracted; corollas ovate; leaves elliptic, somewhat acute, entire, deciduous, sprinkled with resinous dots underneath. *Ait.*

The leaves of this very common shrub are oval, the young ones acute, the older ones blunt; their under surface covered with shining, adhesive, resinous particles. Flowers in lateral clusters. Corolla five cornered, ovate, contracted at the mouth, of a dull reddish green. Fruit globular, black, sweet.—Woods and hills.—June.

VACCINIUM CORYMBOSUM. *L.* *Bilberry. Blueberry.*

Corymbs bracted; corollas somewhat cylindrical; leaves lance-elliptic, nearly entire, acute, pubescent underneath.

Syn. VACCINIUM AMOENUM. Ait.
VACCINIUM DISOMORPHUM. Mich.

This shrub, like some others of the genus to which it belongs, varies considerably in size, and sometimes rises into a small tree. The leaves are oblong-oval, acute, mucronated, obsoletely serrulate, paler and somewhat downy underneath. The flowers, which appear early in May, before the leaves are fully expanded, are oblong, larger than in the last species, white, acid to the taste, containing much honey. They grow in lateral clusters or corymbs, and make a handsome appearance. Berries sweet, acid.—Swamps and wet pastures.—Perennial.

TRIGYNIA.

116. POLYGONUM.

Polygonum aviculare. ***L.*** *Knot grass.*

Stem procumbent, herbaceous; leaves lanceoval; flowers axillary, subsessile, with eight stamens and three styles.

A hardy weed growing every where, and even common among the bricks and paving stones. Stem slender, spreading, striated, interrupted with frequent joints, branching; the joints furnished with short stipules. Leaves oblong-oval, smooth. Flowers minute, white, in the axils of the leaves.—All summer. —Perennial.

Polygonum hydropiper. ***L.*** *Water pepper.*

Stamens six; styles two, half united; leaves lanceolate, spotless, waved; spike filiform, nodding; stem erect. ***Sm.***

Well known for its intense acrimony. Leaves lanceolate, chiefly smooth. Stipules loose, glabrous, fringed with hairs at top. Spikes of flowers, slender and nodding. Michaux observed eight, and never less than seven stamens in this plant in America.—Rubbish in low grounds, ditches, &c.—August, September.—Annual.

POLYGONUM PERSICARIA. *L.* *Spotted Polygonum.*

Stamens six; styles two, half united; spikes ovate-oblong, erect; peduncles smooth; stipules ciliate. *Curt.*

This plant is without acrimony. Leaves spreading, lanceolate, acute, and commonly marked with a dark spot, somewhat heart-shaped, in the centre. Stipules tubular, short, ciliated at top. Spikes terminal, on smooth footstalks, erect, oblong. Flowers rose coloured.—In the same soils as the last.—July, August.—Annual.

POLYGONUM SAGITTATUM. *L.* *Scratch grass.*

Stem prickly backward; leaves sagittate; flowers in heads, with eight stamens and three styles. *Mich.*

Stem slender, four angled, the angles rough backward with small prickles. Leaves arrow-shaped, oblong, on short petioles, the petiole and mid rib rough backward. Flowers in small heads on the ends of the branches, white or purplish.—Wet ground.—July.—Annual.

POLYGONUM ARIFOLIUM. *L.* *Hastate Polygonum.*

Stem prickly backward; leaves hastate; spikes few flowered, flowers distinct, with six stamens and two styles. *Mich.*

Stem as in the last. Leaves halberd-shaped, twice as large as the last, thin and tender. The stem terminates with a few separate, pale, reddish flowers.—Found in a marshy spot near Sweet Auburn, Cambridge.—June, July.—Annual.

POLYGONUM CONVOLVULUS. *L.* *Black bindweed.*

Leaves heart-arrow shaped; stem twining, angular; segments of the calyx bluntly keeled. *Sm.*

Stem twining, climbing on other plants. Leaves alternate, petioled, heart-shaped, with the hinder lobes acute. Branches axillary. Flowers in terminal, interrupted spikes whitish, the three principal segments of the calyx furnished with a keel, but not winged. Flowers all summer in waste and cultivated ground.—Annual.

Polygonum scandens. *L.* *Climbing Polygonum.*

Leaves heart-shaped; stem twining, angular; segments of the calyx winged.

Stem smooth, climbing. Leaves petioled, heart-shaped, with a deep sinus, acuminate. Branches axillary. Flowers in long leafy racemes. Calyx much larger than in the last species, with three broad, membranous expansions, corresponding to the angles of the seed.—Cambridge.—August.—Perennial.

Class IX. ENNEANDRIA. *Nine stamens.*

Order I. *MONOGYNIA. One style.*

117. LAURUS. Calyx none; corolla six parted, resembling a calyx; nectary three glands, surrounding the germ, each ending in two bristles; inner filaments with two glands each; drupe one seeded.

ENNEANDRIA.

MONOGYNIA.

117. LAURUS.

LAURUS BENZOIN. *L.* *Fever bush. Spice wood.*

Leaves obovate, entire, annual; flowers dicœcious.

Syn. *LAURUS PSEUDO-BENZOIN. Mich.*

An aromatic shrub with a flavour resembling Benzoin. Early in May before the leaves appear, it puts out tufts of small, yellow flowers from the sides of the branches. The leaves are oval or inversely ovate, pale underneath, and somewhat pubescent. Berries red. It grows in low situations at Brighton and elsewhere, but it is not very common in the environs of Boston.

LAURUS SASSAFRAS. *L.* *Sassafras tree.*

Leaves deciduous, entire, and lobed, flowers dicœcious. ***Mich.***

In favourable situations the Sassafras rises into a pretty large tree. The bark of the young twigs is smooth and green. The leaves are partly oval, and partly in two or three large lobes, entire on their margin, and downy underneath. Flowers greenish yellow, appearing in May and June in drooping clusters at the end of the last year's shoots. They are commonly dicœcious. Fruit oval, blue.

The whole of the Sassafras tree has a strong, spicy flavour, which is most powerful in the bark of the root. The young twigs, and especially the pith, abound in mucilage. When first introduced into Europe it acquired great medicinal reputation, and was sold at the high price of fifty livres per pound. An express treatise entitled *Sassafrasologia* was written to celebrate its virtues. Its properties however appear to be those which are common to other warm aromatics.

Class X. DECANDRIA. *Ten stamens.*

Order I. *MONOGYNIA. One style.*

A. *Flowers monopetalous.*

118. EPIGÆA. Calyx double; the outer three leaved, the inner five parted; corolla salver shaped; capsule five celled.

119. GAULTHERIA. Calyx double; the outer two leaved, the inner five cleft; corolla ovate; capsule five celled, covered by the inner calyx, which becomes similar to a berry.

120. ARBUTUS. Calyx five parted; corolla ovate, pellucid at the base; berry superior, five celled.

121. ANDROMEDA. Calyx five parted; corolla ovate; capsule superior, five celled, the partitions from the middle of the valves.

122. RHODODENDRON. Calyx five parted; corolla somewhat funnel form; stamens declined; capsule five celled.

123. KALMIA. Calyx five parted; corolla salver shaped, with ten prominences underneath, and the border five horned; capsule five celled.

B. *Flowers many petalled.*

124. PODALYRIA. Corolla papilionaceous; keel compressed, somewhat longer than the banner; legume inflated, many seeded.

125. Cassia. Corolla unequal, five petalled; three upper anthers barren, three lower ones beaked; loment flat.

126. Rhodora. Calyx five toothed; corolla three petalled, unequal; stamens declined; capsule five celled.

127. Clethra. Calyx five leaved; petals five; stigma three parted; capsule three celled three valved.

128. Pyrola. Calyx five leaved; petals five; capsule superior, opening at the angles, many seeded.

129. Monotropa. Calyx none; petals ten, the five outer ones gibbous at the base; capsule five valved; a fifth part of the fructification often wanting.

Order II. *DIGYNIA. Two styles.*

130. Scleranthus. Calyx five cleft, inferior; corolla none; seeds two, inclosed in the calyx.

131. Saxifraga. Calyx five parted; corolla five petalled; capsule two beaked, one celled; many seeded.

132. Dianthus. Calyx tubular with scales at the base; petals five, with claws; capsule cylindrical, superior, one celled.

Order III. *TRIGYNIA. Three styles.*

133. Arenaria. Calyx five leaved, spreading; petals five, entire; capsule superior, one celled, many seeded.

134. STELLARIA. Calyx five leaved, spreading; petals five, deeply cloven; capsule superior, one celled, many seeded.

135. SILENE. Calyx one leafed, swelling; petals five, with claws, crowned at the mouth; capsule superior, three celled, many seeded.

136. CUCUBALUS. Calyx one leafed, inflated; petals five with claws, not crowned; capsule superior, three celled.

Order V. *PENTAGYNIA. Five styles.*

137. PENTHORUM. Calyx five or ten cleft; petals five or none; capsule five celled, five beaked.

138. CERASTIUM. Calyx five leaved; petals five, cloven; capsule superior, one celled, ten toothed.

139. SPERGULA. Calyx five leaved; petals five, undivided; capsule superior, ovate, one celled, five valved.

Order VI. *DECAGYNIA. Ten styles.*

140. PHYTOLACCA. Calyx five leaved, resembling a corolla; corolla none; berry superior, ten seeded.

DECANDRIA.

MONOGYNIA.

118. EPIGÆA.

EPIGÆA REPENS. *L.* *Ground laurel.*

Leaves heart-ovate, entire; corollas cylindrical. *Sw.*

Stem woody, trailing, hairy. Leaves alternate, oblong, hearted at base, hairy and rough, with hairy petioles. Flowers purple, flesh coloured, or white, in terminal or axillary bunches, of from two to six, on hairy peduncles. Calyx double. Corolla salver shaped, longer than the calyx, hairy within.—It grows in woods.—April, May.

119. GAULTHERIA.

GAULTHERIA PROCUMBENS. *L.* *Partridge berry.*

Stem woody, trailing; leaves obovate, somewhat serrate.

A plant universally known for its pleasant, aromatic flavour. Stem small, creeping. Leaves few on a stem, smooth, evergreen, oval with a tapering base, furnished with a few acuminate serratures. Flowers mostly solitary, axillary, hanging from the axils, white. Fruit a small capsule, surrounded with the calyx, which becomes large, fleshy, and red, resembling a berry.—Woods.—June.

120. ARBUTUS.

ARBUTUS UVA URSI. *L.* *Bear berry.*

Stem procumbent; leaves entire. *L.*

A hardy, trailing evergreen. Stems long and woody, forming beds of considerable size. Leaves obovate, entire, coriaceous, rounded or reflexed on the margin. Flowers in small bunches, drooping, rose coloured. Berries red, remaining long on their stalks.—Woods, Concord, Milton, &c.—June.

The leaves are astringent, and in considerable use as a medicinal article.

121. ANDROMEDA.

ANDROMEDA CALYCULATA. *L.* *Dwarf Andromeda.*

Racemes leaning one way, leafy; corollas subcylindrical; leaves alternate, lanceolate, obtuse, dotted. *L.*

A low, evergreen, early flowering shrub. Leaves oblong, coriaceous, obsoletely serrate, shining, and covered with white dots above, pale underneath. Flowers in terminal racemes, each flower proceeding from the axil of a small leaf. Calyx calyculated. Corolla ovate-cylindrical, white or purplish.—Milton, near Neponset river, and elsewhere.—April.

ANDROMEDA PANICULATA. *Mich.* *Panicled Andromeda.*

Racemes somewhat panicled; corollas depressed-globular, slightly pubescent; anthers short, ovate, obtuse, awnless. *Mich. abr.*

A pretty tall shrub. Leaves deciduous, ovate, mostly entire, somewhat downy. Racemes panicled. Flowers small, white, somewhat spherical, succeeded by globular capsules, which remain through the winter. This plant often bears a large, irregular, spongy excrescence of a yellow colour, the effect of disease.—Swamps.—June.

122. RHODODENDRON.

RHODODENDRON MAXIMUM. *L.* *Rosebay Laurel.*

Leaves oblong, glabrous, paler beneath; umbels

dense, terminal; corollas somewhat bell shaped, petals rounded.

We have no shrub that surpasses the Rhododendron in elegance. With us it hardly rises to a tree. Its leaves are larger than most of our evergreens, smooth and coriaceous, oblong, inclining to wedge form. The flowers grow in large, compact, terminal umbels; segments of the calyx obtuse; corolla of a light rose colour, spreading, deeply five cleft, the segments rounded and concave.—Found in Dedham.—July.

123. KALMIA.

KALMIA LATIFOLIA. *L.* *Broad leaved laurel.*

Leaves ovate-elliptical, in threes, and scattered; corymbs terminal. *L.*

A large and very ornamental shrub, sometimes rising into a tree. Leaves petioled, nearly oval, smooth, shining and coriaceous. Flowers in large corymbs on the ends of the branches. Corollas white, inclining to a rose colour, consisting of a tube longer than the calyx, and a spreading, concave border, with ten depressions below, and divided into five segments at top. The wood is dense and hard, and used by mechanics as a substitute for box. Taken internally the plant is poisonous. It has been used medicinally with advantage.—Grows at Milton and Chelmsford in small quantities; at Cape Ann in great profusion.—June, July.

KALMIA ANGUSTIFOLIA. *L.* *Narrow leaved laurel.*

Leaves lanceolate; corymbs lateral. *L.*

A low shrub with rose coloured flowers, very common in low grounds, and known by the names *sheep poison*, *lambkill*, *low laurel*, &c. Leaves on short petioles, scattered or in threes, lanceolate, obtuse, smooth, evergreen. Flowers in lateral corymbs, proceeding from the axils of the leaves and forming a

sort of whorl round the stem. Properties like the last.—June.

124. PODALYRIA.

PODALYRIA TINCTORIA. *Willd.* *Wild indigo.*

Glabrous; stipules setaceous; leaves subsessile; leafets wedge-obovate; flowers in terminal spikes. *Mich. abr.*

Syn. SOPHORA TINCTORIA. *L.*

A very common, bushy plant, found in woods and dry soils. Stem smooth, very much branched. Leaves in threes on a short petiole; leafets rounded at the end, and tapering to an acute base. Stipules very small, caducous. Flowers in a loose spike, on slender peduncles, yellow. Legumes short, rounded, of a bluish cast.—August.—Perennial.

For the medicinal properties of this plant, see Dr. Thatcher's Dispensatory.

125. CASSIA.

CASSIA CHAMÆCRISTA. *L.* *Dwarf Cassia.*

Leaves in many pairs; petiole with a pedicelled gland; stipules ensiform. *L.*

Leaves pinnate, with ten or a dozen pair of leafets; the petiole with a small gland supported on a footstalk near its base. Flowers often in pairs, near the stem, yellow, two of the petals spotted at base. Like others of its family it shuts its leaves at night, or after an injury.—Road sides.—August.—Annual.

126. RHODORA.

RHODORA CANADENSIS. *L.* *Canadian Rhodora.*

A small shrub with handsome blue or reddish flowers, which appear in the spring before the leaves are perfectly expanded. Its height is one or two feet. Leaves alternate, oval,

mostly entire, pubescent and glaucous underneath. The flowers are in umbels on the ends of the twigs. The corolla consists of three unequal petals, the largest of which is broad, and divided into three segments or lobes at the end, the other two are equal, lanceolate, and obtuse.—Low grounds.—Malden, Cambridge.—May.

127. CLETHRA.

CLETHRA ALNIFOLIA. *L.* *Alder leaved Clethra.*

Leaves obovate, serrate, pubescent underneath; racemes simple, bracted. *Willd.*

A tall, elegant, white flowering shrub. Leaves about three inches long, and from one to two broad, inversely ovate, serrate, downy underneath in one variety, glabrous in another. Flowers in long racemes or loose spikes with downy stalks.—Grows in low soils, Cambridgeport.—July, August.

128. PYROLA.

PYROLA ROTUNDIFOLIA. *L.* *Round leaved Winter green.*

Stamens ascending, pistil declined, raceme many flowered. *Sm.*

A very common species. Root creeping, putting up erect or ascending, angular stems. Leaves petioled, almost round, scarcely serrate, smooth, spreading. Flowers in a long cluster terminating the stem, white, fragrant. The stamens are uniformly bent upward, and the style downward.—Found every where in woods.—June.

PYROLA SECUNDA. *L.* *One sided Winter green.*

Flowers racemed, leaning one way. *L.*

Less frequent than the former, but resembling it in habit. Stem as in the last. Leaves petioled, spreading, ovate, acute, (not obtuse like the last,) minutely serrate, smooth. The flow-

ers all tend to one side of the stem, whence the name. Stamens equal and uniform; style straight, permanent.—Woods.—June.

PYROLA UMBELLATA. *L.* *Umbelled Winter green.*

Flowers in a sort of umbel. *L.*

Equally common with the first, and known by the names of *Rheumatism weed*, *Phipsewa* or *Wipsewog*, &c. Root creeping extensively. Stems ascending, hard and woody at base. Leaves mostly in bunches or whorls, lanceolate, somewhat wedge-shaped, sharply serrate, decurrent on the petiole, smooth, firm, and coriaceous. Flowers in an imperfect umbel, or rather corymb, of from three to six; variegated with purple and white, drooping. Stigma large, obtuse, sessile, moist on the top.—Woods.—July.

129. MONOTROPA.

MONOTROPA LANUGINOSA. *Mich.* *Downy Birdsnest.*

Stem with spiked flowers; bractes and flowers woolly. *Mich.*

A fleshy, white plant. Stem erect, leafy, simple. Leaves whitish, resembling scales, frequent at base, longer and more scattered above. Flowers mostly of eight petals, whitish, covered with fine wool, leaning one way, drooping.—Woods, Roxbury.—June.

MONOTROPA MORISONIANA. *Mich.* *Upright Birdsnest.*

Stem erect, leaves distant, flower single, erect. *L.*

A white plant like the last. Stem more slender and tall. Leaves more remote. The stem supports but one flower, which is large, erect, of ten petals and stamens, surrounding a large, globose germ, which supports a peltate stigma.—Woods.

—June, July.—The Monotropas are said to be parasitic, subsisting on the roots of other plants.

DIGYNIA.

130. SCLERANTHUS.

SCLERANTHUS ANNUUS. *L.* *Common Knawel.*

Calyx of the ripe fruit with sharp, spreading teeth; stems spreading. *Sm.*

A small, obscure plant in gravelly soils, road sides, &c. Stems spreading, decumbent, short. Leaves linear, acute, short, opposite. Flowers green, sessile, in terminal, leafy clusters. Calyx with five acute, spreading, permanent segments. Stamens from five to ten.—July.—Annual.

131. SAXIFRAGA.

SAXIFRAGA VERNALIS. *Willd.* *Early Saxifrage.*

Pubescent; leaves oval, somewhat petioled, crenate; flowers erect, panicled, nearly sessile, alternate.

Syn. SAXIFRAGA VIRGINIENSIS. *Mich.*

One of the earliest flowers upon rocks and dry hills. Leaves mostly radical, spreading, fleshy, elliptical, a little pubescent, crenate or serrate, and tapering into a broad petiole. Stem erect, fleshy, hairy, nearly destitute of leaves. Flowers numerous, crowded, white, arranged in corymbs on the ends of the branches, which, collectively form a sort of panicle. —April, May.—Perennial.

SAXIFRAGA PENNSYLVANICA. *L.* *Pennsylvanian Saxifrage.*

Leaves oblong-lanceolate, a little hairy, denticulate; stem naked; peduncles alternate, forming corymbed heads. *Willd.*

A tall, green plant, of little beauty, growing in meadows. Leaves all radical, five or six times larger than in the preceding species, oblong, approaching to oval, very slightly toothed. Stems large, erect, rank in their growth, bearing heads of small, green flowers, disposed in a sort of panicle.—May.—Perennial.

132. DIANTHUS.

DIANTHUS ARMERIA. *L.* *Wild Pink.*

Flowers aggregate, fascicled; scales of the calyx lanceolate, villous, equal to the tube. *Sm.*

This small species of pink has a leafy, pubescent stem, ending in erect branches. Leaves opposite, linear-lanceolate, entire, pubescent, the lower ones spatulate. Flowers terminal, in bunches, erect, scentless, ephemeral. Calyx equalling the tube of the corolla; petals small, red, with white dots, a little toothed.—On the rocky hills in Roxbury and Salem.—July. Annual.

TRIGYNIA.

133. ARENARIA.

ARENARIA RUBRA. *L.* *Common sandwort.*

Leaves linear, slightly mucronate, stipules membranous, sheathing; seeds compressed, angular, roughish. *Sm.*

A spreading plant, with small, delicate, red flowers. Stems prostrate, slender, smooth, pointed, branching. Leaves small, narrow, ending in a short bristle. Stipules surrounding the stem, whitish, dry. Flower stalks and calyx hairy. Petals small, not exceeding the calyx.—Pastures and road sides.—June, July.

ARENARIA MARINA. *Sm.* *Sea sandwort.*

Leaves semicylindrical, fleshy, awnless; stipules scarious, sheathing; seeds compressed, margined, glabrous. *Sm.*

A more succulent, fleshy plant than the last. Stems prostrate or decumbent, smooth. Leaves short, fleshy, roundish, not ending in a bristle. Flowers pale red, expanded as well as the last in clear weather, and closed in foul. Salt marshes. —July.—By some this is considered a variety of the last.

ARENARIA LATERIFLORA. *L.* *Side flowering sandwort.*

Leaves ovate, obtuse; peduncles lateral, two flowered. *L.*

A slender, delicate species, with white flowers. Stem erect, smooth, filiform, four or five inches high. Leaves opposite, oval, smooth, nearly sessile. Peduncles or flowering branches axillary, very slender, divided about half way, their fork furnished with two minute leafets. Each part of the fork bears a flower.—In wet shady places.—June.—Perennial.

134. STELLARIA.

STELLARIA MEDIA. *Sm.* *Chickweed.*

Leaves ovate, stems procumbent, with an alternate, lateral, hairy line. *Sm.*

Syn. ALSINE MEDIA. L.

Chickweed grows in almost every situation, even between the bricks in the side walks. Its spreading stems are remarkable for a hairy line extending from joint to joint, and occupying the two sides alternately. On breaking the stem an elastic, fibrous substance is drawn out, which retracts when liberated. Leaves opposite, ovate, petioled, entire. Peduncles axillary and terminal, one flowered. Petals white, deeply cleft, so

as to appear ten in number. Stamens three, five, or ten. Capsules opening into six segments.—Flowers from the beginning of spring to the end of fall.—Annual.

STELLARIA GRAMINEA. *Sm.* *Stitchwort.*

Leaves linear-lanceolate, entire; panicle terminal, spreading; calyx three nerved, about equal to the petals. *Sm.*

A small, starry, white flower. Stems decumbent, smooth, very slender. Leaves nearly linear, tapering to a point, opposite, smooth. Petals appearing in ten white, fine segments, like those of Stellaria media.—Grows among the bushes on Craigie's road.—June, July.

135. SILENE.

SILENE PENNSYLVANICA. *Mich.* *Catchfly.*

Viscid-pubescent; root leaves wedge form, stem leaves lanceolate; partial stems few flowered; petals slightly emarginate, subcrenate. *Mich.*

Sometimes called *wild pink*, from its similarity in habit to some of that genus. Leaves of the root spatulate, acute at top, and tapering into a long base; those of the stem lanceolate, opposite. Flowers in upright, terminal bunches. Calyxes nearly cylindrical, hairy, and exceedingly glutinous. Corollas purplish white.—Found in dry, sandy soils.—June.

136. CUCUBALUS.

CUCUBALUS BEHEN. *L.* *Bladder campion.*

Calyx nearly globular, smooth, reticulated with veins; leaves ovate-lanceolate, glaucous, smooth. *Sm. Engl. Bot.*

Syn. SILENE INFLATA. *Sm. Flor. Brit.*

The inflated, bladder-like calyx at once distinguishes this plant from every thing about it. Radical leaves spatulate, stem leaves opposite, ovate, acute, entire. Stems one or two feet high, smooth, panicled. Flowers nodding. Calyx oblong-spherical, thin, elegantly veined. Petals white, spreading, bifid.—About fences and waysides.—July.—Perennial.

PENTAGYNIA.

137. PENTHORUM.

PENTHORUM SEDOIDES. *L.* *Penthorum.*

The only species of its genus. Stem about a foot high, angular. Leaves alternate lance-oval, serrate, acute, green on both sides. Flowers terminal, in a few revolute spikes, of a greenish yellow. Capsule with five beaks at top.—Wet ground, brook sides, &c.—July.—Perennial.

138. CERASTIUM.

CERASTIUM VULGATUM. *L.* *Mouse ear chickweed.*

Hairy, viscid, forming tufts; leaves ovate; petals equal to the calyx; flowers longer than their stalks. *Sm.*

Stems spreading, round, dichotomous. Leaves ovate, opposite. Flowers from the forks of the stem, crowded at the ends, on peduncles shorter than themselves. Petals oblong, white, a little longer than the calyx.—In cultivated ground.—May.—Annual.

139. SPERGULA.

SPERGULA ARVENSIS. *L.* *Corn spurrey.*

Leaves whorled; stalks of the fruit reflexed; seeds kidney shaped, angular, rough. *Sm.*

A weed in corn fields, by many of our farmers denominated

tares. Stems spreading, becoming erect, smooth, round, swelling at the joints. Leaves linear, obtuse, in whorls at the joints. Panicle terminal, forked, the peduncles bent downward as the fruit ripens. Petals little larger than the calyx, white.—June and after.—Annual.

DECAGYNIA.

140. PHYTOLACCA.

PHYTOLACCA DECANDRA. *L.* *Poke, Cocum.*

Flowers with ten stamens and ten styles. *L.*

One of the most common and conspicuous plants in waste grounds, by road sides, &c. Stems purple, branching, six or seven feet high. Leaves large, ovate, acute, entire. Flowers in long, simple racemes, of a dull white; succeeded by large, flat, purple berries, which have been made to furnish a permanent dye. A variety of medicinal properties are attributed to the root of this plant.—Flowers in July and August.—Perennial.

Class XI. DODECANDRIA. *Twelve stamens.*

Order I. *MONOGYNIA. One style.*

141. PORTULACA. Calyx two cleft; corolla five petalled; capsule one celled, opening transversely.

142. LYTHRUM. Calyx twelve toothed; petals six, inserted into the calyx; capsule two celled, many seeded.

Order II. *DIGYNIA. Two styles.*

143. AGRIMONIA. Calyx five toothed, invested with an outer one; petals five, inserted in the calyx; seeds two in the bottom of the calyx.

Order III. *TRIGYNIA. Three styles.*

144. EUPHORBIA. Calyx inflated, inferior; petals or nectaries four or five, standing on the calyx; capsule three lobed, supported by a pedicel.

DODECANDRIA.

MONOGYNIA.

141. PORTULACA.

PORTULACA OLERACEA. *L.* *Purslane.*

Leaves wedge shaped; flowers sessile. *L.*

A succulent, annual plant, common in gardens, cultivated fields, and waste grounds. Stems procumbent, spreading, smooth, fleshy. Leaves wedge shaped, rounded at the end, fleshy, smooth, sessile. Flowers sessile, scattered, yellow. Capsule opening transversely. Flowers all summer.—Annual.

142. LYTHRUM.

LYTHRUM VERTICILLATUM. *L.* *Grass poly.*

Leaves opposite or ternate, lanceolate, petioled; flowers axillary, forming a sort of whorls.

Stems woody at base, two feet high. Leaves opposite or in threes, lanceolate, entire. Flowers on axillary, subdivided peduncles, nearly surrounding the stem. Calyx ending in ten or twelve teeth, accompanied by the same number of long stamens. Petals five or six, of a fine purple, spreading, inserted on the calyx, short in duration.—In watery places near Fresh pond.—July, August.

DIGYNIA.

143. AGRIMONIA.

AGRIMONIA EUPATORIA. *L.* *Agrimony.*

Stem leaves pinnate, the odd one petioled, fruit hispid. *L.*

Rises to the height of two feet, with an angular, hairy stem. Leaves interruptedly pinnate, hairy. Leafets ovate, serrate, all sessile except the terminal one. Stipules large, semicircular,

cut-serrate. Spike long, erect, hairy. Flowers thinly scattered, on short stalks, yellow. Calyx persistent, armed with hooked bristles. The plant is astringent and tonic.—By fences and thickets.—June, July.—Perennial.

TRIGYNIA.

144. EUPHORBIA.

EUPHORBIA HELIOSCOPIA. *L.* *Sun Spurge.*

Umbel five rayed, then three rayed and forked; involucels obovate; leaves wedge form, serrate. *L.*

A weed in rich ground, lactescent, as are the other species. Stem upright, round. Leaves scattered, obovate, or wedge shaped, slightly serrate at the end. Umbel of five rays, supported by a large involucre like the leaves. Rays branching, first into three, then into two divisions. Capsules smooth.—Annual.

EUPHORBIA POLYGONIFOLIA. *L.* *Knot grass Spurge.*

Leaves opposite, quite entire, lanceolate, obtuse; flowers solitary, axillary; stems procumbent. *L.*

A flat, spreading plant, abounding with milky juice. Stems smooth, dichotomous. Leaves opposite, oblong, linear-lanceolate, blunt, nearly sessile. Flowers small, proceeding from the divisions of the stem.—In sandy places, near the sea shore.—June, July.—Annual.

EUPHORBIA MACULATA. *L.* *Spotted Spurge.*

Leaves serrate, oblong, hairy; flowers axillary, solitary; branches spreading.

A flat plant like the last. Stems spreading close to the ground. Leaves oblong, obtuse, obscurely serrulate on the upper part, edged with hairs, and frequently with a dark spot in the centre. Flowers very small, capsule hairy.—Found in sandy soils.—June, July.—Annual.

Class XII. ICOSANDRIA. *Twenty or more stamens, inserted on the calyx.*

Order I. *MONOGYNIA. One style.*

145. PRUNUS. Calyx inferior, five cleft; corolla five petalled; drupe with a smooth or slightly seamed stone.

Order II. *DIGYNIA. Two styles.*

146. CRATÆGUS. Calyx superior, five cleft; petals five; berry two seeded.

Order III. *TRIGYNIA. Three styles.*

147. SORBUS. Calyx superior, five cleft; petals five; berry three seeded.

Order IV. *PENTAGYNIA. Five styles.*

148. PYRUS. Calyx superior, five cleft; corolla five petalled; pome five celled; cells two seeded.

149. SPIRÆA. Calyx inferior, five cleft; corolla five petalled; capsules two valved, many seeded.

Order V. *POLYGYNIA. Many styles.*

150. ROSA. Calyx urn-shaped, fleshy, contracted at the orifice, five cleft; corolla five petalled; seeds numerous, bristly, fixed to the inside of the calyx.

151. RUBUS. Calyx five cleft; corolla five petalled; berry composed of several one seeded granulations.

152. FRAGARIA. Calyx ten cleft; corolla five petalled; seeds smooth, fixed to a deciduous, berry-like receptacle.

153. COMARUM. Calyx ten cleft; corolla five petalled; seeds smooth, fixed to an ovate, spongy, permanent receptacle.

154. POTENTILLA. Calyx ten cleft; corolla five petalled; seeds naked, wrinkled, affixed to a small, juiceless receptacle.

155. GEUM. Calyx ten cleft; corolla ten petalled; seeds with a jointed, bent awn; receptacle columnar.

ICOSANDRIA.

MONOGYNIA.

145. PRUNUS.

PRUNUS VIRGINIANA. *L.* *Wild Cherry.*

Flowers in racemes, leaves deciduous, glandular at the base in front. *L.*

Syn. *CERASUS VIRGINIANA. Mich.*

The wild cherry is with us a tree of middling size, although further to the south and west it attains to a magnitude of the first rate. Michaux mentions trees on the banks of the Ohio, which are from eighty to a hundred feet high, and their trunks from twelve to sixteen feet in circumference. The wood is a well known material in cabinet work, approaching mahogany in its colour and qualities. Leaves alternate, smooth, oval-oblong, acuminate, serrate, with commonly two pair of glands at the top of the petiole in front. Flowers in terminal clusters, white. Fruit small, black, somewhat bitter. The bark has a strong, bitterish, spicy taste, and has been found a useful tonic.—May, June.

DIGYNIA.

146. CRATÆGUS.

CRATÆGUS CRUS GALLI. *L.* *Common Thorn bush.*

Thorny; leaves obovate, subsessile, shining, coriaceous; leafets of the calyx lanceolate, subserrate. *Ait. abr.*

A strong, branching, thorny shrub. Leaves inversely ovate, sharply and irregularly serrate, sometimes cleft, tough, smooth. Thorns two or three inches long, rigid, acute. Flowers white,

in terminal corymbs. Calyx leaves linear.—About fences and thickets.—May, June.

TRIGYNIA.

147. SORBUS.

Sorbus aucuparia. *Mich.* *Mountain Ash.*

Leaves pinnate, smooth, leafets equal, serrate, flowers corymbed.

Syn. *Pyrus aucuparia. Sm. Fl. Brit.*
Sorbus Americana. Muhl.

An ornamental tree, much cultivated. Bark smooth. Leaves pinnate, serrate, entire at base, smooth on both sides. Flowers white, in large, terminal corymbs. In the European tree, the one commonly cultivated, the young leaves are pubescent or downy underneath. In the American, which is perhaps a distinct species, they are perfectly glabrous. Styles three, sometimes more. Berries red, lasting all winter.—Grows native at Cape Ann, and in Worcester county.—May.

PENTAGYNIA.

148. PYRUS.

Pyrus arbutifolia. *Willd.* *Choke berry.*

Leaves obovate, acuminate, serrate, downy underneath, the midrib glandular above; flowers in corymbs. *Willd.*

Syn. *Mespilus arbutifolia. Lin. Mich.*

A slender shrub. Leaves oblong, oval or obovate, finely serrate, the midrib spotted on the upper side, with small, dark glands. Flowers white, in compound, downy corymbs. Fruit with five cells and ten seeds, of the size of large whortleberries, rough and astringent to the taste.—Low woods and thickets.—May, June.

PYRUS BOTRYAPIUM. *Willd.* *June berry.*

Leaves oblong-elliptic, pointed, smooth; flowers racemed, petals linear lanceolate, germs pubescent, segments of the calyx glabrous. *Willd.*

Syn. *MESPILUS CANADENSIS. Lin. Mich.*
MESPILUS ARBOREA. Mich. f.

This species commonly attains the height of a small tree, and is very conspicuous when in flower in the early part of May. Leaves oblong, varying in width, sharply serrate, acute. Flowers white, in long, downy racemes. Fruit dark blue, of the size of whortleberries, pleasant to the taste.—Low woods and swamps.—Berries ripe in June.

149. SPIRÆA.

SPIRÆA ALBA. *Ehr.* *White Spiræa. Meadow sweet.*

Leaves wedge-lanceolate, serrate, glabrous; flowers panicled.

Syn. *SPIRÆA SALICIFOLIA. Mich.*

A slender shrub three or four feet high, bearing large, terminal bunches of white flowers. Stems smooth, reddish. Leaves broad lanceolate, somewhat obtuse, smooth and thin, acutely serrate, tapering at base. Panicle terminal, composed of small flowering, branches at the top of the stem, and from the axils of the upper leaves. Flowers small, crowded.—Meadows and wet pastures.—July, August.

SPIRÆA TOMENTOSA. *L.* *Downy Spiræa. Hardhack.*

Leaves lanceolate, unequally serrate, downy underneath; flowers twice racemed. *Willd.*

A very common shrub in pastures and low grounds, about the size of the last. Among its purple flowers the dead tops of the last year's fructification are conspicuous. Leaves nearly

oval, thick, and tough, dark green above, whitish and downy underneath. Flowers small, blue, inclining to purple, in long conical bunches on the end of the stems.—July, August.

POLYGYNIA.

150. ROSA.

Rosa Caroliniana. *L.* *Swamp rose.*

Germs globular, hispid; peduncles somewhat hispid; stem with stipular prickles; petioles prickly. *L.*

This rose grows in swamps and wet grounds, sometimes forming thickets of itself. The stems vary greatly in the number and size of their prickles, even those which spring from the same root. They are commonly of a reddish colour, and their prickles nearly straight. Leaves pinnate, with five or seven pair of oval leafets, sharply serrate and paler on the under side. Flowers red, growing in a sort of corymbs. Fruit spherical, flattened at the ends.—June, July.

151. RUBUS.

Rubus occidentalis. *L.* *Black raspberry. Thimbleberry.*

Leaves trifoliate, downy underneath, stem prickly, petioles round. *L.*

Frequent about fences, thickets, &c. The stems are prickly, long and slender, bending over in the form of an arch, and covered with a bluish or glaucous powder, which readily rubs off. Leafets in threes, oval, loosely serrate, acuminate, green above, whitish and downy underneath, the two lateral ones nearly sessile. Petioles roundish, prickly. Flowers white, in terminal racemes. Fruit black, sprightly and pleasant to the taste. —May.

RUBUS STRIGOSUS. *Mich.* *Wild red raspberry.*

Unarmed, strongly hispid, leafets in threes, or five pinnate, oval, obtuse at base, lined and white-downy underneath, the odd one often sub-cordate. *Mich.*

A more delicate fruit than the last, found in similar places. The stem and branches are without prickles, but covered with thick stiff bristles. Petioles hispid, bearing one or two pairs of lateral leafets and a terminal one; the lateral leafets sessile. Flowers white, in terminal clusters with hispid peduncles. Fruit red, richly flavoured.—May.

RUBUS VILLOSUS. *Ait.* *High blackberry.*

Leafets three or five, oval, acuminate, serrate, villous on both sides; stems and petioles prickly.

This is a tall bramble that spreads rapidly by its roots, and is often troublesome in pastures and fields. The stem is armed with strong acute prickles; the young twigs, leaf, and flower stalks covered with short fine hair. Leaves somewhat hairy on both sides, not white underneath. Flowers in long terminal racemes, white. Fruit large, black, and pleasantly flavoured. —May, June.

RUBUS TRIVIALIS. *Mich.* *Low or running blackberry. Dewberry.*

Stems procumbent, leafets three or five, oval, serrate, nearly smooth; flower stalks mostly solitary.

Syn. RUBUS PROCUMBENS. *Muhl.*

Stems prickly, slender, flexible, running several yards upon the ground, but seldom putting out roots, unless accidentally covered. Leaves nearly smooth, green on both sides. Pedun-

cles long, slender, mostly undivided, furnished with minute prickles. Flowers solitary, white. Fruit large, black, sweet. —Common in barren sandy soils.—May.

RUBUS ODORATUS. *L.* *Flowering raspberry.*

Leaves simple, palmate; stem unarmed, many leaved, many flowered, *L.*

A superb, flowering shrub, commonly cultivated. I have not seen it growing wild in the immediate vicinity of Boston, though it is plentiful at the distance of thirty or forty miles to the westward. Leaves simple, large, mostly five lobed, serrate; petioles and peduncles hairy. Flowers large, purple, forming a sort of corymb. Fruit dry.—Flowers in June and after.

152. FRAGARIA.

FRAGARIA VIRGINIANA. *Ehr.* *Wild strawberry.*

Calyx of the fruit spreading: hairs of the petioles erect, of the peduncles appressed; leaves smooth above. *Willd.*

The common wild strawberry is a very delicious fruit, and when cultivated is inferior to few imported species. The berries ripen early, are of a light scarlet colour, exquisitely flavoured, but more soft and perishable than the other kinds. The herbage is more smooth and even than in other species, the peduncles shorter, so that the fruit is commonly concealed under the leaves. Flowers white, appearing in May.

Wild strawberries are frequently sour from the circumstance of their ripening in the shade among the high grass.

153. COMARUM.

COMARUM PALUSTRE. *L.* *Marsh cinquefoil.*

A genus nearly related to the last, with only one species. Stem round, rising from one to two feet. Leafets three, five, or

seven, oblong, serrate, whitish underneath. Flowers dark, dull purple, every part permanent. Calyx ten cleft, every other segment larger. Corolla five small petals. Fruit enclosed in the flower, resembling a strawberry, but spongy and permanent. —Found in Neponset river.—June.—Perennial.

154. POTENTILLA.

POTENTILLA ANSERINA. *L.* *Silver weed. Wild tansey.*

Leaves interruptedly pinnate, serrate, silky underneath, stem creeping, peduncles one flowered, *Sm.*

A handsome plant common on the marshes at South Boston and Cambridge. Stems hairy and reddish, creeping extensively among the grass. Leaves pinnate, the large leafets alternating with small ones, green above and of a fine silvery appearance beneath. Flowers yellow, solitary, on long, axillary peduncles.—June.—Perennial.

POTENTILLA ARGENTEA. *L.* *Hoary cinquefoil.*

Leaves quinate, wedge form, cut, downy underneath, stem nearly erect.

A small, humble species, frequent on Boston common and elsewhere in dry soils. Stems spreading, half erect, white and downy. Leaves alternate, consisting of five wedge form or spatulate leafets, cut into a few lobes or large teeth at the end, white and downy underneath. Flowers numerous, on the ends of the branches, small, yellow.—From June to September—Perennial.

POTENTILLA SIMPLEX. *Mich.* *Common Cinquefoil, or Five-finger.*

Erect, simple, hairy; leaves five-digitate, oblong, oval; peduncles lateral, solitary, elongated, one flowered. *Mich.*

Stem erect at base, declining at top, rough, hairy. Leafets in fives, oval, deeply serrate, the nerves hairy underneath. From the axils of the leaves proceed a single flower, a petioled leaf, and the rudiment of a branch. Flowers yellow. Petals roundish, inversely heart-shaped, larger than the calyx.—Pastures.—May, June.—Perennial.

POTENTILLA NORVEGICA. *L.* *Norway Cinquefoil.*

Leaves ternate; stem dichotomous; peduncles axillary. *L.*

An erect, hairy plant. Stem round, straight, forked at top. Leaves in threes, oval, cut-serrate, their petioles and veins covered with long hairs. Stipules ovate, acute, somewhat toothed. Flowers numerous, axillary and terminal, somewhat crowded. Petals yellow, shorter than the calyx.—By road sides and thickets.—July.—Perennial.

155. GEUM.

GEUM RIVALE. *L.* *Water Avens.*

Radical leaves lyrate; stipules ovate, acute, cut; flowers nodding, awns feathery, twisted. *Sm.*

A fine plant conspicuous in meadows for its high, nodding, dark coloured flowers. Stem round, erect, drooping at top. Radical leaves lyrate or interruptedly pinnate, the terminal leaflet large and lobed, the whole serrate and hairy. Flowers terminal, two or three on a stalk; calyx reddish brown, closed; petals erect, hardly exceeding the calyx, inversely heart-shaped, veined and shaded with yellow and purple. The fruit becomes erect, and is crowned with long, feathery, contorted awns.—May, June.—Perennial.

GEUM VIRGINIANUM. *L.* *Virginian Avens.*

Leaves trifoliate, upper ones lsnceolate; petals

shorter than the calyx; seeds hairy, with naked awns, twisted at top.

Stem erect, one or two feet high, branching, hairy. Lower leaves in threes, sometimes in fives; the upper ones simple, oval, or lanceolate, the whole unequally serrate. Stipules large, ovate, few toothed. Flowers nodding, fruit erect. Petals white, not longer than the calyx.—Thickets.—June, July.—Perennial.

Class XIII. POLYANDRIA. *Many stamens.*

Order I. *MONOGYNIA. One style.*

156. CHELIDONIUM. Calyx two leaved; petals four; silique superior, two valved, one celled, linear; seeds crested.

157. ACTÆA. Calyx four leaved; petals four; berry one celled, many seeded; seeds nearly flat.

158. CISTUS. Calyx five leaved, two of the leaves smaller; capsule superior, three valved, opening at top.

159. SARRACENIA. Calyx double; the lower three leaved, the upper five leaved; petals five; stigma shield like; capsule five celled.

160. TILIA. Calyx five parted; petals five; capsule superior, coriaceous, five celled, five valved, opening at the base.

161. SANGUINARIA. Calyx two leaved; corolla eight petalled; capsule two valved, many seeded.

162. PODOPHYLLUM. Calyx three leaved; corolla nine petalled; berry one celled, crowned with the stigma.

163. NYMPHÆA. Calyx four or five leaved; corolla many petalled; stigma radiate, sessile; berry many celled, many seeded.

Order V. *PENTAGYNIA. Five styles.*

164. AQUILEGIA. Calyx none; petals five;

nectaries five, horn shaped, alternate with the petals.

Order VI. *POLYGYNIA. Many styles.*

165. CLEMATIS. Calyx none; petals from four to six; seeds with tails; receptacle capitate.

166. THALICTRUM. Calyx none; petals four or five; seeds without tails.

167. HELLEBORUS. Calyx none; petals five; nectaries tubular, two lipped; capsules many seeded.

168. CALTHA. Calyx none; petals five; nectaries none, capsules many.

169. HYDROPELTIS. Calyx none; petals six, three external shortest; nectaries none; capsules several, one celled, two seeded, invested with the permanent corolla.

170. ANEMONE. Calyx none; petals from five to nine; seeds numerous.

171. RANUNCULUS. Calyx five leaved; petals from five to eight, with a pore or scale bearing honey at the base of each, inside; seeds naked.

172. MAGNOLIA. Calyx three leaved; petals from six to nine; capsules two valved, clustered; seeds pendulous.

POLYANDRIA.

MONOGYNIA.

156. CHELIDONIUM.

CHELIDONIUM MAJUS. *L.* *Celandine.*

Peduncles umbelled. ***L.***

Found among rubbish, under fences, &c. attaining the height of one or two feet. Leaves pinnate, spreading; leafets lobed, pale green, smooth, their stalks winged where they join the main petiole. Flowers yellow, in a remote umbel, proceeding from the axils of the leaves. The calyx, petals, and stamens are extremely deciduous, which occasions perplexity in examining the plant. Every part of this vegetable abounds with a bright yellow, or saffron coloured juice.—May, June.—Perennial.

157. ACTÆA.

ACTÆA RUBRA. *Willd.* *Red Bane berries.*

Raceme ovate; petals shorter than the stamens; fruit berried, red. ***Willd.***

Syn. *ACTAEA SPICATA. L. Mich.*

Leaves spreading, thrice ternate; leafets acuminate, cut-serrate. Clusters terminal, solitary. Flowers white, the calyx deciduous. The flowers are succeeded by large, shining, bright red berries, of a nauseous taste, and poisonous aspect.—Grows in swamps and dark woods.—May, June.—Perennial.

Another plant which is commonly considered a variety of Actæa spicata, but which appears to me undoubtedly a distinct species; has smaller berries, white, tipped with red, on large,

incrassated pedicels, of nearly the size of the common peduncle.

158. CISTUS.

CISTUS CANADENSIS. *L.* *Canadian Cistus.*

Herbaceous, without stipules; leaves alternate, lanceolate, stem ascending. *L.*

Syn. *HELIANTHEMUM CANADENSE. Mich.*

Stem slender, downy, hardly a foot high. Leaves small, nearly sessile, lanceolate, obtuse, downy, white underneath. Flowers lateral, solitary, yellow. Stamens inclined to the upper side. Petals very tender and deciduous; after they have fallen, the plant has the appearance of Lechea major, for which it has been mistaken.—Sandy pastures and hills.—June.—Perennial.

159. SARRACENIA.

SARRACENIA PURPUREA. *L.* *Sidesaddle flower.*

Leaves decumbent, shorter than the scape, inflated; ventral wing arched; appendix broad heart shaped, waved.

The whole of this genus are plants of very singular structure. The Sarracenia purpurea is the only one which endures our climate. The leaves, which are all radical, are formed by a large hollow tube, swelling in the middle, curved and diminishing downward, till it ends in a stem, contracted at the mouth, furnished with a large, spreading, heart shaped appendage at top, which is hairy within; and a broad, wavy wing extending the whole length on the inside. The full grown leaves will contain a wine glass of water, and are rarely found empty. The scape is long, smooth, and cylindrical, supporting a large, nodding flower. Exterior calyx of hree small leaves; interior of five oval, obtuse leaves, inclining to purple. Petals five, large,

oval, purple. Germ nearly globular, surrounded by the broad, spreading stigma, expanded like an umbrella, and divided at its margin into five lobes alternating with the petals.—Swamps and meadows.—June.—Perennial.

160. TILIA.

TILIA AMERICANA. *L.* *Lime tree or Bass wood.*

Leaves roundish-heart shaped, abruptly acuminate, sharply serrate, smooth; petals truncated at top; nut ovate. ***Mich. f.***

A tree of the middle size, remarkable for the neatness of its foliage, and the regularity of its form. The leaves are large, roundish, heart-shaped at base, finely serrated. The footstalk supporting a bunch of flowers, proceeds from the centre of an oblong, pale, floral leaf or bracte, as in the others of the genus. Flowers greenish white, succeeded by small, hard, greyish capsules. The wood of this tree is white, smooth, and soft. It is used in the manufacture of certain kinds of furniture, and of the pannels of carriages. The bark is fibrous, strong, and flexible, and makes tolerable ropes.—July.

161. SANGUINARIA.

SANGUINARIA CANADENSIS. *L.* *Blood root. Puccoon.*

One of the earliest spring flowers. Leaves radical, somewhat heart-shaped, parted into numerous lobes. The first leaf which appears, is rolled round the stalk and flower, which it seems to embrace and protect. Flowers single, erect, with two deciduous calyx leaves, and eight beautiful spreading white petals. The leaves increase greatly in size after the flowers have fallen. The root is fleshy and abrupt, and abounds with a bright orange coloured juice. It possesses active, medicinal properties.—Grows in thickets at South Boston, Cambridge, &c.—April, May.—Perennial.

162. PODOPHYLLUM.

PODOPHYLLUM PELTATUM. *L.* *May apple.*

Leaves peltate, lobed. *L.*

This plant has an upright stem, supporting two large, spreading leaves, with a flower in their fork. The leaves are peltate, though the petiole is very near to one edge. They are divided in a palmate manner, into six or eight large lobes, which are again cut or lobed at the top. Flower large, white, on a short axillary peduncle. The fruit is as large as a pigeons egg, and not unpleasant to the taste. The root is medicinal, answering as a substitute for jalap.—It is found native at Medway, twenty five miles from Boston.—May.—Perennial.

163. NYMPHÆA.

NYMPHÆA ADVENA. *Ait.* *Yellow water lily.*

Leaves heart shaped, entire, lobes divaricate; calyx six leaved, longer than the petals. *Ait.*

The floating leaves of this and the subsequent species are well known to anglers under the name of "lily pads." In this species they are heart shaped, with rounded lobes, commonly floating, but in shallow water erect. Petioles half round. Flowers yellow, the calyx leaves roundish, concave, shaded with dull purple within. Petals somewhat wedge shaped. Stigma radiate and toothed.—Rivers and ponds.—June.—Perennial.

NYMPHÆA ODORATA. *Ait.* *Fragrant water lily.*

Leaves heart-shaped, entire, emarginate, the lobes divaricate with a blunt point; calyx four leaved. *Ait.*

Few plants possess a more exquisite fragrance than the common white water lily. It is found only in deep water, where its large perennial roots are secure from the frost in

winter. The leaves are nearly orbicular, divided behind, the fissure or sinus furnished with an angle or tooth on each side. Calyx of four leaves, green without, white within. Petals numerous, white. Stamens yellow. The flowers expand in the morning, giving the surface of the water a magnificent appearance; but are closed in the afternoon.—June.—July.

PENTAGYNIA.

164. AQUILEGIA.

AQUILEGIA CANADENSIS. *L.* *Wild columbine.*

Nectaries straight; stamens longer than the corolla. *L.*

This early flower is more delicate in its habit and colours than the common garden species. Stem erect, branching. Leaves once or twice ternate, lobed. Flowers on the ends of the branches, pendulous, scarlet without, and yellow within. The nectaries resemble straight horns, alternating with the petals, which are oval and acute. Stamens numerous, yellow, projecting. After flowering the fruit becomes erect.—Dry hills, rocks, and pastures.—April, May.—Perennial.

POLYGYNIA.

165. CLEMATIS.

CLEMATIS VIRGINIANA. *L.* *Traveller's joy, Virgin's bower.*

Leaves trifoliate; leafets heart-shaped, sublobate-angular, climbing; flowers dicœcious. *L.*

A climbing, hardy vine. The stem gives off at intervals a pair of opposite petioles, which twine round objects of support, serving the purpose of tendrils; each bears three heart-shaped leafets, which are variously toothed and lobed. Peduncles axillary, bearing cymes of white flowers, which are dicœcious, the

fertile flowers having imperfect anthers. The most remarkable appearance of this plant is when in fruit; the long feathery tails of the seeds appearing like tufts of wool. Grows in low ground.—Very abundant on the banks of the Neponset river, Milton.—August.

167. HELLEBORUS.

HELLEBORUS TRIFOLIUS. *L.* *Gold thread.*

Scape one flowered; leaves ternate. *L.*

A small delicate plant found among the leaves and moss in pine swamps, &c. The roots creep extensively, and are of a bright yellow colour. Leafets in threes, evergreen, roundish, lobed and crenate, acute at base. Scape bearing one small, starry, white flower. Nectaries within the petals, cup shaped. Stamens white. Pistils on footstalks which afterward form an umbel supporting the capsules.—Flowers in April and May.—Perennial.

The root is a very pure bitter, but nearly destitute of astringency. It is a popular remedy for aphthous affections of the mouth, and great quantities are sold in the shops.

168. CALTHA.

CALTHA PALUSTRIS. *L.* *Marsh Marigold. Meadow cowslip.*

Stem erect; leaves round heart shaped. *Forster.*

Brought to market in the spring under the name of *Cowslips*. At that season its bright yellow blossoms are very common and conspicuous in meadows and wet situations. Stem upright, furrowed. Leaves smooth, heart or kidney shaped, crenate, the radical ones on petioles, those of the stem nearly sessile. Flowers on axillary stalks, with large, roundish, glossy petals of a bright yellow, as are the stamens. The young buds are sometimes substituted for capers.—Perennial.

169. HYDROPELTIS.

HYDROPELTIS PURPUREA. *Mich.* *Water target.*

Syn. *IXODIA PADUSTRIS. Solander.*
BRASENIA HYDROPELTIS. Muhl.

An aquatic plant, the only species of its genus. Its leaves whcih can hardly be mistaken for any thing else, are perfectly elliptical, with the leaf stalk inserted exactly in their centre, forming a centro-peltate leaf. Their upper surface is smooth and shining, like those of the water lilies, among which they float. Flowers dark purple; petals six, the three outermost shortest. Stamens numerous. The immersed portions of the plant, particularly the stalks and young leaves are cloathed with a thick gelatinous substance, transparent, and insipid to the taste.—In Fresh pond, and other stagnant waters.—July.—Perennial.

170. ANEMONE.

ANEMONE HEPATICA. *L.* *Early Anemone.*

Leaves three lobed, entire. *L.*

It is a circumstance not a little perplexing to students, that the first plant in a genus without a calyx, should have a calyx of three leaves. Linnæus in associating this plant with the anemonies, considered the calyx from its remoteness, to be an involucrum and not a perianth. Leaves radical, on hairy petioles, with three broad oval lobes. Peduncles and involucre hairy. Petals red. This elegant little plant is one of the earliest visitors in spring, flowering in sunny spots before the snow has left the ground.—Woods, Cambridge, Roxbury.—April.—Perennial.

ANEMONE NEMOROSA. *Mich.* *Wood Anemone.*

Seeds pointed; leaves three; leafets lobed; stem one flowered.

This species and the next are among the earliest flowers of spring, appearing in April, and continuing through the month of May. In this the root is creeping. Stem erect, supporting a single flower on its summit, and three compound leaves given off in a whorl below. Leafets toothed and lobed, paler underneath. Flower of six petals, which are white, shaded with purple on the outside. The whole plant is acrimonious to the taste.—In woods and about fences, very common.—Perennial.

ANEMONE THALICTROIDES. *L.* *Rue leaved Anemone.*

Flowers umbelled, stem leaves simple, whorled; root leaves twice ternate. *L.*

Syn. *THALICTRUM ANEMONOIDES. Mich.*

Readily distinguished from the last, by its number of flowers. Root tuberous. Stem upright, simple, divided at top into a sort of umbel, of several flowers accompanied by a number of simple heart shaped, three lobed leaves. The leaves which proceed from the root are compound, usually three times ternate. Flowers white, petals varying in number; the largest flowers having eight or ten.—Woods and pastures.—April, May.—Perennial.

ANEMONE VIRGINIANA. *L.* *Tall Anemone.*

Stem branched; petioles three leaved, leafets cut-lobed, serrate; flower stalks wand-like; seeds in an oblong ovate head, woolly. *Mich.*

A tall, very straight plant, unlike in its habit to those described. Leaves ternate, lobed, paler underneath. Peduncles very long, straight, erect, parallel. Flowers terminal, green, solitary. Petals ovate, acute, covered outside with silken down. The seeds form an oblong cylindrical head. Found in dry woods, road sides, &c.—June, July.—Perennial.

171. RANUNCULUS.

RANUNCULUS ABORTIVUS. *L.* *Small flowered crowfoot.*

Radical leaves heart-shaped, crenate; stem leaves ternate, angular; stem about three flowered. *L.*

This species is easily distinguished by its small flowers, and undivided, radical leaves. The leaves which grow from the root are heart or kidney shaped, crenate, the longest ones sometimes lobed. Stem leaves in threes, at the base of each peduncle, nearly sessile, the upper ones lanceolate. Stems erect, smooth, few flowered. Flowers small, yellow.—Woods.—May, June.—Perennial.

RANUNCULUS SCELERATUS. *L.* *Celery leaved crowfoot.*

Lower leaves palmate; uppermost in finger like divisions; fruit oblong.

A smooth, branching plant, with small flowers. Stem thick, round and hollow. Lower leaves divided deeply, but not so far as the petiole, the segments toothed and lobed. Upper leaves sessile, divided to the bottom. Flowers numerous, on petioles of unequal length. Calyx pubescent, somewhat deflected. Petals small, concave, yellow. Seeds small, in a close, cylindrical head.—Grows in watery places.—June, July.—Perennial. It is very acrid, when fresh, and may be made to produce blisters.

RANUNCULUS FASCICULARIS. *Muhl.* *Early crowfoot.*

Leaves ternate, subpinnate; root fascicled.

An inhabitant of dry, rocky hills, flowering in April and May. The root consists of numerous fasciculated, fleshy divisions. The leaves are pubescent, but have a smooth appearance. Those of the root grow on long stalks, and are ternate. Leafets

three lobed, remote, the terminal one deeply cleft, appearing like three distinct leafets, so that the leaf has a pinnate form. Peduncles a little angular. Calyx spreading, hairy underneath. Petals longer than the calyx, transparent at base. Nectary obovate.—Perennial.

RANUNCULUS BULBOSUS. *L.* *Bulbous crowfoot. Buttercups.*

Calyx reflexed; flower stalks furrowed; stem upright, many flowered; leaves compound. *L.*

Very frequent among the grass in pastures, road sides, &c. The root is solid and fleshy, acrimonious and almost caustic. Stems erect, furnished with leaves, somewhat hairy. Leaves hairy, in three or five principal divisions, variously toothed and cut. Flower stalks upright and furrowed. Flowers of a bright, glossy yellow; calyx leaves bent downward against the flower stalk, hairy. Fruit in globular heads.—May and after.—Perennial.

RANUNCULUS ACRIS. *L.* *Tall crowfoot.*

Calyx spreading; flower stalks round and even; leaves in three divisions with many segments, the upper ones linear.

Distinguished by its superior height, being usually about two feet high. Root fleshy, resembling the last, but smaller in proportion to the plant. Root leaves large, hairy, divided into three or five diverging lobes, which are again repeatedly subdivided, ending in acute segments and teeth. Petioles hairy, especially at their ends. Uppermost leaves in three entire, linear segments. Stem erect, branching. Flower stalks round, not furrowed. Calyx spreading under the petals, not reflexed. Petals large, shining, yellow. Seeds in globular heads. This plant spreads rapidly, and is exceedingly troublesome in meadows and mowing ground. Being cut with hay, it would no doubt be pernicious to cattle, were not its acrimony lost by drying. It flowers all summer.—Perennial.

RANUNCULUS REPENS. *L.* *Creeping crowfoot.*

Calyx spreading; flower stalks furrowed; scions creeping; leaves compound. *L.*

The flowers of this and the two last are very similar, and confounded under the common name of Butter cups. An attention to the calyx and flower stalks readily distinguishes them. In this the leaves are mostly ternate, lobed and toothed, often marked with a light spot at their sinuses. The plant sends out long, prostrate stems or runners, which sufficiently distinguish it from the others. Flower stalks furrowed as in Ranunculus bulbosus, calyx spreading as in Ranunculus acris. Petals bright yellow, often emarginate.—Shady places.—Flowering all summer.—Perennial.

RANUNCULUS FLUVIATILIS. *River crowfoot.*

Leaves all dichotomous, capillary; stem floating. *Willd.*

Syn. *RANUNCULUS FLUITANS. Poir.*

This is undoubtedly a distinct species from Ranunculus aquatilis, having its leaves all capillary in the stillest water. Its flowers are yellow. Stem long, smooth, furnished at regular intervals with nearly sessile leaves, divided by regular forks into innumerable capillary segments. The flowers only emerge from the water. Peduncles smooth, furrowed. Calyx leaves fleshy, concave. Petals smaller than in Ranunculus bulbosus. Nectaries tubular. Fruit in ovate heads, the seeds ending in a long, sharp point.—In a pond on Brighton road and elsewhere in deep water.—June.

172. MAGNOLIA.

MAGNOLIA GLAUCA. *L.* *Beaver tree.*

Leaves elliptic, obtuse, glaucous underneath; petals obovate.

The only species of this superb genus, that has been found native in our climate. It attains the height of a dozen feet, but is sometimes killed down to the roots by severe winters. Leaves perfectly oval, glaucous or ash coloured underneath. Flowers large, white, solitary on the ends of the branches, fragrant. Petals concave, inversely ovate. Fruit ovate, somewhat conical. The bark is highly aromatic, and possesses medicinal properties. It grows plentifully in a sheltered swamp at Gloucester, Cape Ann, twenty five miles from Boston, which is perhaps its most northern boundary.—June, July.

Class XIV. DIDYNAMIA. *Four stamens, two long and two short.*

Order I. *GYMNOSPERMIA. Seeds naked.*

A. *Calyxes mostly five cleft.*

173. GLECHOMA. Anthers approaching each other in pairs, each pair forming a cross.

174. MENTHA. Corolla nearly equal, four cleft; the broadest segment notched; stamens straight, distant.

175. TEUCRIUM. Corolla without any upper lip; stamens projecting through a fissure in the upper side of the tube; sides of the fissure divaricate.

176. LEONURUS. Corolla with the upper lip erect, concave, undivided, hairy; lower lip three parted, with the middle segment undivided; stamens longer than the orifice.

177. STACHYS. Corolla with the lateral segments of the lower lip reflected at the side; stamens when old bent outwards.

178. NEPETA. Corolla with the lower lip crenate; the orifice with a reflected margin; stamens approximate.

179. BRACHYSTEMUM. Tube of the corolla as long as the calyx; orifice without hairs; stamens nearly equal, very short, included in the corolla.

180. PYCNANTHEMUM. Tube of the corolla as

long as the calyx; upper lip mostly entire; stamens distant, two as long as the upper lip, two shorter; heads with many bractes.

181. VERBENA. Calyx with one tooth truncated; corolla nearly equal, curved; stamens two or four; seeds two or four.

B. *Calyxes two lipped.*

182. SCUTELLARIA. Calyx furnished with a lid, which closes after flowering.

183. PRUNELLA. Filaments forked; one point of the fork bearing the anther; stigma cloven.

184. TRICHOSTEMA. Corolla with the upper lip falcated; stamens very long.

Order II. *ANGIOSPERMIA. Seeds in a vessel.*

185. MELAMPYRUM. Calyx four cleft; corolla personate, compressed at top; capsule two celled; seeds double, gibbous, smooth.

186. SCROPHULARIA. Calyx five cleft; corolla somewhat globular, reversed; the middle segment of the lip placed internally; capsule two celled.

187. ANTIRRHINUM. Calyx five parted, corolla personate, with a prominent nectary underneath; capsule two celled.

188. PEDICULARIS. Calyx five cleft; corolla with the upper lip compressed and emarginate; capsule two celled, oblique, pointed; seeds few.

189. GERARDIA. Calyx five leaved; corolla somewhat salver-shaped, two lipped; lower lip

three lobed, lobes emarginate, middle one two parted; capsule two celled, bursting at base.

190. Mimulus. Calyx prismatic; corolla with the upper lip reflected at the sides; capsule two celled, many seeded.

191. Chelone. Calyx five leaved, corolla inflated, the lips closed; rudiment of a fifth glabrous, filament between the upper stamens.

DIDYNAMIA.

GYMNOSPERMIA.

173. GLECHOMA.

GLECHOMA HEDERACEA. *L.* *Ground Ivy. Gill.*

Leaves reniform, crenate.

A creeping plant, usually found about fences or in shady places. Stems square, procumbent. Leaves opposite, petioled, heart or kidney shaped, crenate, hairy. Flowers in whorls, a few together. Calyx striated, ending in five unequal, pointed segments. Corolla blue, the upper lip straight, the lower expanded, three lobed, the middle lobe emarginate. Each pair of anthers meet, forming a cross. Ground ivy has a peculiar strong taste and smell, and possesses some medicinal reputation.—May, June.—Perennial.

174. MENTHA.

MENTHA BOREALIS. *Mich.* *Horse-mint.*

Ascending, low, pubescent; leaves petioled, oval-lanceolate, acute at both ends; flowers in whorls, stamens projecting. *Mich.*

Inhabits the banks of rivulets and ditches. Stem square, downy. Leaves opposite, on downy petioles, oval, acute, serrate, the upper ones lanceolate. Flowers in regular, axillary whorls, on short peduncles. Stamens somewhat longer than the corolla.—June, July.—Perennial. The taste and properties resemble those of Pennyroyal.

MENTHA VIRIDIS. *L.* *Spear-mint.*

Spikes interrupted; leaves sessile, lanceolate,

acute, naked; bractes setaceous, and, with the calyx teeth, somewhat hairy. *Sm.*

This well known mint spreads rapidly by its creeping roots in moist places. Stems erect, smooth, acute-angled. Leaves sessile, lanceolate, acute, serrate, smooth. Spikes long, acute, consisting of distinct, remote whorls. Pedicels glabrous. Flowers purple. The whole plant has a pleasant, aromatic flavor, well known.—Flowers in August.—Perennial.

175. TEUCRIUM.

Teucrium Canadense. *L.* *Wild Germander.*

Stem herbaceous, erect; leaves lanceolate, serrate, whitish underneath; spike crowded, many flowered, long. *Mich.*

Stem erect, square, downy, a foot or more in height. Leaves opposite, soft with fine down, lanceolate, acute, serrate. Spike formed of small whorls of flowers, furnished with short bractes. Calyx downy, its segments rather blunt. Corolla pale red, the stamens issuing from a fissure in the upper side. —Road side, Cambridgeport.—July.—Perennial.

176. LEONURUS.

Leonurus cardiaca. *L.* *Motherwort.*

Upper leaves lanceolate, three lobed or entire. *Sm.*

A common plant among rubbish and about walls. Stem two or three feet high, large, square, downy. Lower leaves lobed and broad, the upper ones narrower, the highest of these lanceolate, entire; all of them spreading or bent downwards, downy underneath. Flowers in many whorls. Calyx teeth rigid and prickly; corolla hairy without, variegated with white and red within. The herb has a strong, pungent odour, and is a popular remedy in considerable request.—July.—Perennial.

177. STACHYS.

STACHYS ASPERA. *Mich.* *Hedge nettle. Woundwort.*

Stem erect, hairy backward; leaves somewhat petioled, lanceolate, sharply serrate; spike of whorls about six flowered; calyx with firm prickles. *Mich.*

Stem square, a foot high, the angles furnished with reflexed hairs. Leaves lanceolate, serrate, somewhat heart shaped at base, the upper surface and nerves underneath covered with hairs. Flowers in whorls, constituting a leafy, terminal spike, red. Calyx teeth prickly. Stamens in the old flowers bent outward, forming an angle over the edge of the corolla.—Road sides, Chelsea, Brighton.—June, July.—Perennial.

178. NEPETA.

NEPETA CATARIA. *L.* *Catmint or Catnep.*

Flowers spiked; the whorls slightly pedunculated. Leaves on footstalks, heart-shaped, tooth serrated. *Sm.*

This well known plant grows every where in dry soils, about fences and buildings. Its name is derived from the great partiality of cats for the odour of the plant. Stem two or three feet high, square and downy. Leaves long-heart shaped, serrate, pale underneath, covered with soft down. Calyx ribbed. Corolla tubular, upper lip straight, lower lip with the middle lobe spreading, crenate, elegantly dotted.—July.—Perennial.

179. BRACHYSTEMUM.

BRACHYSTEMUM VIRGINICUM. *Mich.* *Virginia thyme.*

Stem erect, somewhat pubescent; leaves lanceolate or linear, entire, smooth; heads somewhat fascicled. *Mich. abr.*

Syn. *THYMUS VIRGINICUS. L.*

An erect plant with fastigiate branches. Stem square, downy at the angles. Leaves opposite, rigid, very narrow, rounded at base, and tapering to a long, acute point. Under a magnifier they appear covered with fine, black dots. Flowers in numerous small heads, mostly terminal. Taste like pennyroyal. —By fences and woods.—July, August.—Perennial.

180. PYCNANTHEMUM.

PYCNANTHEMUM INCANUM. *Mich.* *Wild Basil.*

Stem pubescent; leaves petioled, oval, acuminate, serrate, white-downy; heads compound, terminal and lateral; bractes setaceous. ***Mich. abr.***

Syn. *CLINOPODIUM INCANUM. L.*

A white looking plant, covered with soft down. Stem one or two feet high, covered with soft down, especially toward the top. Leaves oval, pointed, with a few remote serratures on the sides, soft and velvet-like, white underneath. Flowers on white, branching footstalks, in lateral and terminal whorls or heads. Bractes numerous, white, the inner ones setaceous. Corollas projecting, pale, spotted with purple.—Woods and mountains. —July, August.—Perennial.

PYCNANTHEMUM ARISTATUM. *Mich.* *Wild Basil.*

Whitish; leaves lance-oval, somewhat serrate, on short petioles; whorls and terminal head sessile; bractes linear, awned. ***Mich. abr.***

Syn. *NEPETA VIRGINICA. L.*

Stem erect, a foot or more in height, downy. Leaves opposite, ovate, acuminate, slightly serrate, dotted under a magnifier, the upper ones hoary with white down. Each branch has one or two downy, sessile whorls, and a terminal head. Bractes acuminated with a sort of awn. Flowers small. Both

these species have a strong, pungent taste, much like penny-royal.—Chelsea, road side.—July, August.—Perennial.

181. VERBENA.

VERBENA HASTATA. *L.* *Common blue Vervain.*

Leaves lanceolate, serrate, acuminate, the lower ones lobed; spikes erect, filiform, panicled; stamens four.

A tall, shewy plant, common by road sides in low ground. Stem three or four feet high. Leaves opposite, rough, sharply serrate, tapering to a long point; the lower ones broader, with commonly a lobe on each side at base, giving them somewhat a hastate form. Spikes numerous, erect, slender. The flowering commences at their base, and is long in reaching their summit. Flowers close, of a dark purplish hue, with four stamens.—July, September.—Perennial.

VERBENA URTICIFOLIA. *L.* *Nettle leaved Vervain.*

Leaves oval, serrate, acute, petioled; spikes divergent, filiform, panicled; stamens four.

Common among rubbish, about fences and buildings. Stem erect, two or three feet in height. Leaves broad, oval or ovate, rough, undivided. Panicles of long, very slender, flexile spikes, diverging or divaricated, with distinct, somewhat remote flowers, not imbricate like the last. Flowers small, white. A weed of no beauty.—July, August.—Perennial.

182. SCUTELLARIA.

SCUTELLARIA LATERIFLORA. *L.* *Side flowering Scullcap.*

Leaves smooth, rough on the keel; racemes lateral, leafy. *L.*

Stem square, branching. Leaves on petioles of considerable length, ovate, acute, toothed, mostly smooth. Racemes

on long, axillary stalks. Flowers small, blue, numerous, interspersed with small leaves. The singularity of this genus consists in the form of the calyx, which is furnished with a ridge on the upper side, the part beyond this serving as a lid. After the corolla falls, this lid shuts down against the opposite side, so as perfectly to inclose the seeds. By lateral pressure the lid opens, discovering the four seeds within.—Meadows.—July.—Perennial.

183. PRUNELLA.

PRUNELLA PENNSYLVANICA. *Willd.* *Self heal.*

Leaves petioled, ovate-lanceolate, toothed; upper lip of the calyx truncated, three awned; stem ascending.

A handsome plant, native of meadows and moist pastures. Stem nine or ten inches in height, hairy. Leaves opposite, broad-lanceolate, slightly toothed, their nerves and petioles hairy, the upper pair close to the spike and sessile. Spike short, ovate. Bractes reniform, ciliate. Flowers ringent, purplish. Calyx two lipped, the upper lip broad and abrupt, with three straight, short bristles or awns; the lower lip ending in two acute teeth.—July.—Perennial.

184. TRICHOSTEMA.

TRICHOSTEMA DICHOTOMA. *L.* *Trichostema.*

Stamens very long, exserted. *L.*

An annual plant, remarkable for its long, arching stamens. Stem round, somewhat four sided, hairy. Branches opposite, subdivided in a brachiate manner, their last divisions commonly, though not always, dichotomous. Leaves oval-lanceolate, obtuse, entire. Flowers numerous, terminal. Calyx swelling, its upper lip of two short, acute teeth; lower lip twice as long, three toothed. Corolla purple, with two long, slender stamens

projecting from one side and arching over to meet the other. Seeds with an indented surface. In sandy pastures and hills.—August.—Annual.

ANGIOSPERMIA.

185. MELAMPYRUM.

MELAMPYRUM AMERICANUM. *Mich.* *Cow-wheat.*

Leaves linear-lanceolate, the uppermost with a few setaceous teeth at base; flowers axillary.

Pretty common in woods. Stem erect, smooth, branching, less than a foot in height. Leaves opposite, lanceolate, smooth, entire, with a long, obtuse point, the upper ones furnished with several bristle-like teeth at base. Flowers axillary, whitish, slender. Capsules flat, acute, pointing downward, containing four seeds.—June, July.—Annual.

186. SCROPHULARIA.

SCROPHULARIA MARILANDICA. *L.* *Figwort.*

Leaves cordate, serrate, acute, rounded at base; stem obtuse-angled. *L.*

A tall, erect plant with flowers resembling capsules. Stem square with blunt corners, smooth except at the joints, where there is a slight pubescence between the petioles. Leaves opposite, oblong, obtuse at base, tapering to an acute point, serrate. Panicle erect, with opposite branches. Flowers small, somewhat globular. Calyx teeth obtuse. Corolla reversed, of a dark, brownish colour, the lip with an internal prominence, which may be mistaken for a fifth stamen. Capsule globular, tipped with the style.—Lynn beach island.—August.—Perennial.

187. ANTIRRHINUM.

ANTIRRHINUM LINARIA. *L.* *Toad flax.*

Leaves linear-lanceolate, crowded; stem erect; spikes terminal, sessile; flowers imbricate. *L.*

The yellow spikes of this plant are very common by roadsides, though it is not probable, that the species is indigenous. Stem one or two feet high, nearly smooth. Leaves numerous, narrow, and pointed, smooth. Branches numerous, axillary, bearing tufts of leaves. Spike long, crowded with yellow flowers, the corolla furnished with a long, hollow spur below. The mouth is closed with a protuberant palate from the under lip, and gapes open upon lateral pressure, a character which has given the genus the name of *Snap dragon*.—July, August.—Perennial.

ANTIRRHINUM CANADENSE. *L.* *Canada Snap dragon.*

Leaves alternate, linear, remote, glabrous; flowers racemed; stem simple, scions procumbent. *Willd.*

A slender, annual plant, seldom exceeding a foot in height. Stem erect, smooth. Leaves small, scattered, erect, linear, obtuse. Flowers in a loose, terminal raceme, small, blue. Upper lip of the corolla reflexed, the lower much larger, spreading. Spur filiform, acute. Some leafy, procumbent scions occasionally proceed from the root.—Road sides.—July, August.

188. PEDICULARIS.

PEDICULARIS CANADENSIS. *L.* *Louse-wort.*

Stem simple, spike somewhat leafy; helmet of the corolla with two setaceous teeth; calyx truncated downward. *L.*

Stem erect, under a foot in height, downy at top. Leaves dark green, lanceolate, with crenate lobes, obtuse, smooth. Spike terminal, short, crowded, leafy. Calyx cut off in an oblique direction downward. Corolla yellowish, the upper lip forming a long helmet, its point square, with a small acute tooth on each side; lower lip three lobed.—Pastures.—May.—Perennial.

189. GERARDIA.

GERARDIA FLAVA. *L.* *Yellow Gerardia.*

Leaves lanceolate, pinnate-dentate; stem simple. *L.*

One of the most showy of our wild wood flowers. Stem erect, one or two feet in height, pubescent. Leaves opposite, the lower ones more or less pinnatifid and cut, the upper ones lanceolate, entire or serrate, obtusely pointed. Spike terminal, few flowered. Flowers opposite, trumpet shaped, large, yellow. Peduncles short, downy. Stamens somewhat woolly; anthers with two points at the base. The whole plant turns black in drying.—Woods.—August.—Perennial.

GERARDIA PEDICULARIA. *L.* *Bushy Gerardia.*

Leaves oblong, twice serrate; stem panicled, calyxes crenate. *L.*

A tall, bushy plant, which would be one of the most ornamental, were not its flowers very perishable, and deciduous. Stem erect, with numerous opposite branches. Leaves pinnatifid, with serrate lobes. Peduncles hairy. The structure of the flowers is very elegant. The calyx ends in five spreading leafets, indented on their margin. Corolla yellow, downy without, trumpet shaped, with spreading lobes. The leaves and flowers turn black in drying.—Dry woods.—Very common at Sweet Auburn, Cambridge.—August.—Perennial.

GERARDIA PURPUREA. *L.* *Purple Gerardia.*

Stem with many opposite branches; leaves narrow-linear; flowers scattered, purple, sub-sessile. *Mich.*

An annual species, much smaller than the preceding. Stem erect, smooth, branching. Leaves opposite, linear, entire, curling when the plant droops. Flowers purple, frequently opposite, on short peduncles. Calyx teeth acute.—Common in pastures and road sides in moist ground.—August.—Annual.

190. MIMULUS.

MIMULUS RINGENS. *L.* *Monkey flower.*

Leaves lanceolate, acuminate, glabrous, sessile; peduncles longer than the flower. *Willd.*

A handsome plant, fond of wet soils, where it attains the height of two feet and upward. Stem erect, smooth. Leaves opposite, closely sessile, serrate, tapering to an obtuse point. Peduncles axillary, curving upwards. Calyx tubular, with five acute angles, and as many pointed teeth. Corolla much longer than the calyx, blue, contracted at the mouth, with spreading segments.—July, August.—Perennial.

191. CHELONE.

CHELONE GLABRA. *L.* *Snake-head.*

Glabrous; leaves oval or lanceolate, unequally serrate; flowers spiked. *Mich.*

Found in brooks and wet ground, where it forms bunches, and rises two or three feet. Stem smooth, bluntly four cornered. Leaves opposite, lanceolate, acuminate, dark green and polished above. Flowers in a terminal spike, a few only expanding at once. Calyx nearly sessile, with five short, rounded

segments. Corolla large, white, inflated, contracted at the mouth, not unlike the head of a serpent; the lower lip in three small segments, with two woolly stripes within. Filaments hairy below. The rudiment of a fifth filament appears to be wanting in this species.—Roxbury, Cambridge.—August, September.—Perennial.

Class XV. TETRADYNAMIA. *Six stamens, four long and two short.*

Order I. *SILICULOSA. Seeds in a silicle.*

192. LEPIDIUM. Silicle elliptic, emarginate, the valves carinate but not margined.

193. THLASPI. Silicle inversely heart shaped, the valves carinate and margined.

194. BUNIAS. Silicle deciduous without opening, somewhat four sided, two of its angles more acute.

Order II. *SILIQUOSA. Seeds in a silique.*

195. RAPHANUS. Silique cylindrical, swelling at the seeds, somewhat jointed.

196. CARDAMINE. Silique bursting elastically, the valves revolute, and equal to the partition.

197. SISYMBRIUM. Silique cylindrical, opening with nearly straight valves; valves equalling the partition.

198. ERYSIMUM. Calyx closed; stigma capitate; silique columnar, square.

199. SINAPIS. Calyx spreading; silique cylindrical, with the partition longer than the valves.

TETRADYNAMIA.

SILICULOSA.

192. LEPIDIUM.

LEPIDIUM VIRGINICUM. *L.* *Wild cress or peppergrass.*

Radical leaves pinnatifid; stem leaves linear-lanceolate, serrate; flowers with four petals and two stamens; silicle lenticular. ***Mich. abr.***.

Syn. *THLASPI VIRGINIANUM. Poir.*

Frequent by road sides, flowering during most of the summer and autumn. Stem woody and branching, round, smooth. Branches numerous, alternate. Leaves of the root pinnatifid, of the stem lanceolate, glabrous, furnished with a remote tooth or two. Racemes terminal, long, naked. Pedicels capillary. Flowers very small, diandrous, white. Silicles flat, orbicular, with a deep notch in the end. Taste like common Garden cress or peppergrass.

193. THLASPI.

THLASPI BURSA PASTORIS. *L.* *Common Shepherd's purse.*

Hairy, silicle inversely heart shaped, somewhat triangular; radical leaves pinnatifid. ***Sm.***

Equally common with the last, in pastures and road sides, continuing to flower during most of the vegetating season. Stem branching, round. Root leaves numerous, spreading, pinnatifid, toothed, somewhat hairy. Stem leaves oblong, toothed, arrow shaped at base, closely sessile. Flowers small, white. Silicle smooth, inversely heart shaped, crowned with the short style.—Annual.

194. BUNIAS.

BUNIAS EDENTULA. *(mihi.)* *American sea rocket.*

Bunias foliis obovatis, sinuatis; siliculis glabris, articulis binis, monospermis, edentulis.

Leaves obovate, sinuate; silicles with two smooth, one seeded, toothless joints.

A fleshy, maritime plant, found on various parts of the sea coast. Stem glabrous, flexuous, deeply, and irregularly furrowed, very much branched. Leaves fleshy, smooth, obovate, toothed and sinuated, caducous. Branches axillary, leafy. Spikes or racemes terminal. Flowers on short, fleshy peduncles. Calyx of four erect, fleshy segments. Petals spreading, rounded at the end. Stamens nearly equal, longer than the calyx. Stigma concave. Silicles smooth, roundish, consisting of two one seeded joints, the lower one somewhat globular, without teeth or prominences, marked on each side with a longitudinal, depressed line, sometimes abortive. Upper joint ovate, round, marked on each side with an elevated line, terminating in a flat, emarginate, or three toothed beak. Seeds facing different ways. The silicle is drupaceous, and in drying becomes quadrangular. The plant is succulent and heavy.—Grows abundantly at Cape Ann. Found also at South Boston.—July. —Annual.

SILIQUOSA.

195. RAPHANUS.

RAPHANUS RAPHANISTRUM. *L.* *Wild radish.*

Pods round, jointed, smooth, of one cell. *L.*

A hardy weed, frequent in the gravel by road sides, but most troublesome in cultivated fields. Stem branching, round, bristly, glaucous. Leaves rough, lower ones lyrate, upper ones toothed. Calyx bristly. Petals spreading, yellow, turning white as they grow old, not unfrequently of a light blue. Pods

erect, knobbed, tapering, smooth, ending in a long beak. When dry, they are striated, and abruptly contracted between the cells, which are hard and somewhat bony. On cutting the pod across between the seeds, it appears two celled. The seeds however are contained between the laminæ of the apparent partition.

196. CARDAMINE.

CARDAMINE PENNSYLVANICA. *Muhl.* *American Water Cress.*

Leaves pinnate; leafets angular-toothed, obtuse. ***Willd.***

Found in brooks and ponds, growing under water, except its upper leaves and flowers. Leaves alternate, smooth, pinnate; leafets oblong, rounded at the end, with a few large teeth on each side, the terminal leafet much exceeding the rest in size. The leafets in the upper leaves are entire. Flowers small, white. Pods narrow, erect, an inch or more in length.—Brighton.—May.

197. SISYMBRIUM.

SISYMBRIUM NASTURTIUM. *L.* *European Water Cress.*

Pods declining; leaves pinnate, leafets roundish heart shaped. ***Sm.***

Found in clear, fresh water, in brooks and ponds. Stems spreading or floating in the water, angular, branched, rooting at base. Leaves mostly immersed or floating, pinnate, the leafets rounded, with a few obtuse lobes or teeth. Flowers white. Pods shortish, on spreading footstalks. The taste is pungent and pleasant.—In small ponds, Roxbury, Cambridge.—June.

198. ERYSIMUM.

ERYSIMUM OFFICINALE. *L.* *Hedge mustard.*

Pods pressed close to the main stalk; leaves runcinate. ***L.***

The whole plant is more or less hairy, and attains the height of about two feet. Stem round; branches given off at a large angle, and curving. Leaves lyrate-runcinate. The fruitful branches are long and slender, covered with close, sessile pods, and ending in yellow flowers.—About rubbish and cultivated ground.—All summer.—Annual.

199. SINAPIS.

SINAPIS NIGRA. *L.* *Common mustard.*

Pods smooth, four cornered, pressed close to the raceme; upper leaves linear-lanceolate, entire, smooth. *Sm.*

Very common in cultivated and waste grounds; usually regarded as a weed, though its seeds furnish the common table mustard. Stem round, striated, smooth, three or four feet high, branching. Leaves variously lobed and toothed, the lower ones rough, upper ones smooth, deflexed, the highest narrow, small, entire. Flowers numerous and showy. Calyx and corolla yellow. Pods erect, close to the stalk, quadrangular, ending in a short beak.—June, July.—Annual.

Class XVI. MONADELPHIA. *Stamens united by their filaments into one parcel.*

Order I. *TRIANDRIA. Three stamens.*

200. SISYRINCHIUM. Spathe two leaved; petals six, nearly equal; capsule inferior, three celled.

Order V. *DECANDRIA. Ten stamens.*

201. GERANIUM. Calyx five leaved; petals five, regular; nectary five glands on the base of the longer filaments; fruit beaked, separating into five one seeded capsules.

202. OXALIS. Calyx five leaved; petals five, connected at base; capsule superior, five celled, five angled, opening at the angles.

Order VIII. *POLYANDRIA. Many stamens.*

203. MALVA. Calyx double, the outermost two or three leaved; capsules numerous, one seeded, disposed in a flat ring.

204. ALTHÆA. Calyx double, the outermost from six to nine cleft; capsules numerous, one seeded, in a flat ring.

205. HIBISCUS. Calyx double, the outermost many leaved; capsule five celled, many seeded.

MONADELPHIA.

TRIANDRIA.

200. SISYRINCHIUM.

SISYRINCHIUM ANCEPS. *Blue eyed grass.*

Stem two edged, spathe longer than the flowers, petals mucronated, germs glabrous.

Syn. *SISYRINCHIUM GRAMINEUM. Curt.*

The small, delicate, blue flowers of this plant are not unfrequent among the grass in moist ground. Stem two edged, the edges extending into a wide margin; smooth, with one or two branches, often a foot high. Leaves linear, grass like, sheathing at base. Spathe of two unequal leaves, swelling, pointed, with from one to six flowers. Peduncles filiform. Flowers shorter than the spathe, blue. Germs smooth. Petals six, spreading, terminated by a point.—June, July.—Perennial.

DECANDRIA.

201. GERANIUM.

GERANIUM MACULATUM. *L.* *Spotted geranium or Cranesbill.*

Peduncles two flowered; stem forked, erect; leaves five parted and cut, the upper ones sessile. *L.*

No family of plants is more extensively cultivated for ornament than the Linnæan genus Geranium, since divided by L'Heritier into three genera, Erodium, Pelargonium, and Geranium. It must be confessed that a great number of exotic species are carefully propagated in green houses and parlours,

which are altogether inferior to the present very beautiful native. It is very common about fences and the edges of woods, preferring a soil that is somewhat moist. Stems erect, hairy, dividing by forks, or more numerous branches, one or two feet high. Leaves large, spreading, hairy, divided in a palmate manner into five or seven lobes, which are variously cut and toothed at their extremities, the lower ones petioled, the upper ones nearly sessile. As the leaves grow old, they are usually marked with pale spots about the sinuses. Peduncles long, hairy, supporting about two flowers. Calyx five leaved, those edges, which are outermost in the bud, hairy. Petals rounded, blue. Fruit ending in a long beak, containing five awns, which spring out and scatter the seeds when ripe. The root is perennial, very astringent, and useful for its medicinal properties.—May, June.—Perennial.

GERANIUM ROBERTIANUM. *L.* *Herb Robert.*

Peduncles two flowered; leaves somewhat pedate, pinnatifid, five angled; calyx ten angled, capsules rugged. *Sm.*

A branching plant, much smaller in its flowers and leaves than the preceding. Stem spreading, fragile, commonly of a reddish cast. Leaves somewhat hairy, petioled, ternate or quinate, the divisions mostly pinnatifid. Peduncles long, somewhat hairy, with two terminal flowers. Calyx hairy. Petals rounded, pale purple. The whole plant has a peculiar, strong smell.—Road sides, Malden.—Flowering most of the summer and autumn.—Annual.

202. OXALIS.

OXALIS STRICTA. *L.* *Upright Wood Sorrel.*

Peduncles umbelliferous; stem branching, erect. *L.*

This plant is pretty common about the borders of fields and

cultivated grounds. Stem erect, varying greatly in height, according to the soil in which the plant grows. Leaves ternate, inversely heart shaped, very thin and delicate; their common petiole long and slender, without stipules. Peduncles axillary, generally longer than the petioles, (in which respect the plant differs from that of Willdenow,) supporting small, terminal umbels of yellow flowers. Fruit beaked, erect.—Flowers all summer.

POLYANDRIA.

203. MALVA.

MALVA ROTUNDIFOLIA. *L.* *Round leaved Mallow.*

Stem prostrate; leaves roundish, heart shaped, obtusely five lobed. Fruit stalks bent downward. ***L.***

Root fusiform. Stems lying upon the ground, branching. Leaves roundish, somewhat reniform, crenate, with five or seven imperfect lobes. Petioles long, hairy. Stipules lanceolate, ciliate. Flower stalks axillary, shorter than the petioles, several together, hairy. Outer leaves of the calyx linear, inner ones ovate. Petals purplish white, deeply emarginate. Fruit flat, with numerous capsules forming its circumference, the stalks commonly deflexed.—In cultivated ground, about houses and side walks.—All summer.

204. ALTHÆA.

ALTHÆA OFFICINALIS. *L.* *Marsh Mallow.*

Leaves downy, oblong, ovate, obtusely three lobed, toothed. ***Willd.***

This plant grows spontaneously on the marshes at South Boston, and is said to be found at other places on the sea coast. It is probably not originally native, but imported from Europe. Root perennial, long, white. Stem erect, firm, covered with

thick, woolly down. Leaves alternate, ovate, with three or more imperfect lobes, toothed, exceedingly downy and velvet-like to the touch. Flowers large, axillary and terminal. Calyx downy. Petals light, purple, inversely heart shaped. The whole plant, especially the root, abounds in mucilage, and is much used as a demulcent remedy.—August, September.—Perennial.

105. HIBISCUS.

HIBISCUS PALUSTRIS. *L.* *Marsh Hibiscus.*

Stem herbaceous, simple; leaves ovate, somewhat three lobed, downy underneath; flowers axillary, *Willd.*

A tall, handsome plant. Stem erect, somewhat downy. Leaves ovate or three lobed, green above, whitish and soft with down underneath, serrate, acuminate. Flowers nearly as large as the hollyhock, on axillary stalks. Calyx downy, its outer segments linear. Corolla pale purple.—Found in Newton near the banks of Charles river.—August.—Perennial.

Class XVII. DIADELPHIA. *Stamens united in two distinct sets.*

Order III. *OCTANDRIA. Eight stamens.*

206. POLYGALA. Calyx five leaved, two of the leaves wing shaped and coloured; corolla with a cylindrical banner; legume inversely heart shaped, two celled,

Order IV. *DECANDRIA. Ten stamens.*

207. GENISTA. Calyx with the upper lip two toothed, the lower three toothed; banner oblong, reflected back by the pistil and stamens; stigma involute; stamens all united.

208. LUPINUS. Stamens all united; anthers alternately rounded and oblong; legume coriaceous, swelling at the seeds.

209. LATHYRUS. Style flat, villous above, broader upward; two upper segments of the calyx shorter.

210. TRIFOLIUM. Legume hardly longer than the calyx, falling off entire; flowers more or less in heads.

211. HEDYSARUM. Calyx five cleft; keel of the corolla obtuse; loment jointed, the joints compressed and one seeded.

212. GLYCINE. Calyx two lipped; keel of the corolla turning back the banner at the tip; legume one celled, many seeded.

213. MEDICAGO. Legume spiral, compressed, pushing the keel from the banner.

DIADELPHIA.

OCTANDRIA.

206. POLYGALA.

POLYGALA SANGUINEA. *L.* *Caducous Polygala.*

Stem branching at top; leaves alternate, linear; spikes headed; flowers beardless. ***Mich. abr.***

The purple, or rose coloured heads of this plant are very observable in moist ground, during the months of August and September. Stem erect, angular, its branches exceeding the main stem in height. Leaves alternate, smooth, linear-lanceolate. Flowers in terminal, cylindrical heads. As these heads increase at their summit, the lower flowers fall off, leaving a ragged or squarrous peduncle, on which Linnæus founded his specific character.

POLYGALA PAUCIFOLIA. *Muhl.* *Few leaved Polygala.*

Flowers crested, terminal, three; stem simple, erect; naked below; leaves ovate. ***Willd.***

An exceedingly delicate, purple flowering plant. Stem upright or ascending, four or five inches high, smooth. The lower part is naked, with the exception of some small, remote, oval scales or leafets. The leaves are four or five in number, at the top of the stem, ovate, acute, entire. Flowers usually two or three at the end of the stem, crested.—Found at Brooklyn.—May.—Perennial.

DECANDRIA.

207. GENISTA.

GENISTA TINCTORIA. *L.* *Wood waxen. Dyers' weed.*

Leaves lanceolate, smooth; branches round, striate, erect, unarmed. *Sm.*

Root woody, tough, creeping extensively. Stems or branches numerous, erect or ascending, round, furrowed, smooth. Leaves alternate, sessile, lanceolate, acute. Flowers on the upper part of the branches, axillary, solitary, nearly sessile, bright yellow. This plant has overrun the hills on the south side of Salem, so as to give them, in the month of July, an uniformly yellow appearance at a distance. It was probably imported originally from Europe. The whole plant is said to dye a fine yellow colour.

208. LUPINUS.

LUPINUS PERENNIS. *L.* *Common lupine.*

Calyxes alternate without appendages, upper lip emarginate, lower entire. *L.*

This common garden flower grows wild very plentifully in the woods at Watertown. Stems erect, somewhat hairy. Leaves digitate, consisting of about eight or ten lanceolate-wedge shaped leaves, arranged like rays around the end of the petiole. They are somewhat hairy and pale underneath. Flowers blue, in a terminal spike or raceme.—Perennial.

209. LATHYRUS.

LATHYRUS VENOSUS. *Muhl.* *Veiny Lathyrus.*

Peduncles many flowered; tendrils many leaved; leafets ovate, obtuse; stipules half arrow shaped, obtuse. *Willd.*

Stem angular, flexous. Leaves abruptly pinnate, the petiole ending in a three-cleft tendril. Leafets ovate, obtuse, mucronated, smooth, veiny. Stipules broad, half arrow shaped, acuminate. Racemes on axillary stalks, consisting of large, elegant, purple flowers.—Found about the borders of marshes, flowering in June.—Perennial.

210. TRIFOLIUM.

TRIFOLIUM ARVENSE. *L.* *Field trefoil.*

Heads very hairy, cylindrical; teeth of the calyx bristle shaped, longer than the corolla; leafets narrow-obovate. *Sm.*

This annual species of trefoil is exceedingly common in roads and dry fields, flourishing in the most barren and gravelly soils. Stem erect, round, hairy, branching. Leaves on short footstalks, consisting of three narrow, inversely ovate, hairy leafets. The flowers grow in long, cylindrical heads, or spikes; the calyx teeth ending in feathery hairs, which project beyond the corolla, give the heads a downy and grayish appearance. Pod very small, one seeded.—July, August.

TRIFOLIUM REPENS. *L.* *White clover.*

Heads like umbels; legumes four seeded; stems creeping. *L.*

Common in pastures, flowering from May to September. Root perennial. Stems spreading, leafy, smooth. Leaves on long petioles; leafets roundish, acute at their base, finely serrate, commonly marked with a white, semicircular spot. Flowers white, in a dense umbel, resembling a head; corollas persistent, enclosing the pod, which contains three or four seeds.—White clover increases rapidly, and resists drought. Cattle are very fond of it, and it forms one of the best materials for feed in pastures.

TRIFOLIUM PRATENSE. *L.* *Red clover. Honeysuckle.*

Spikes dense; stems ascending; corollas unequal; four of the calyx teeth equal; stipules awned. *Sm.*

Stem oblique, somewhat branching, hairy toward the top. Leafets ovate, with usually a white spot on the upper side, somewhat hairy underneath. Stipules broad, membranous, ribbed, ending in a point or awn. Flowers red, in large ovate spikes resembling heads, somewhat sweet scented. Calyx of five segments, the lowest longest. Banner of the corolla longer than the wings and keel. The excellence of red clover for hay is well known. It is extensively cultivated here alone, or in combination with herds grass, (Phleum pratense.) In its wild state it grows every where, and flowers from May to September.—Perennial.

TRIFOLIUM OFFICINALE. *L.* *Melilot.*

Legumes in racemes, naked, two seeded, wrinkled, acute, stem erect. *L.*

Stem upright, furrowed, two feet high. Leafets oblong or lance-obovate, serrate, smooth. Spikes axillary and terminal, on footstalks, many flowered. Flowers nodding, mostly to one side, yellow. Calyx and pedicels hairy. Pods pendulous, oval, tapering at both ends, hairy. This trefoil in drying exhales an agreeable scent, similar to the sweet scented vernal grass. Horses are said to be very fond of it.—June, July.—It grows in great plenty on the borders of the marsh at South Boston, where it was probably introduced from Europe.

211. HEDYSARUM.

HEDYSARUM FRUTESCENS. *L.* *Shrubby Hedysarum.*

Leaves ternate, lance-oblong, obtuse, silky beneath; stipules subulate; racemes axillary, ovate,

shorter than the leaves; loments of one joint, hairy, shorter than the calyx. *Willd.*

Syn. LESPEDEZA CAPITATA. *Mich.*

A slender, whitish, woody plant, found in dry woods at Brighton and elsewhere. Stems erect, covered wtih soft hair, very leafy. Leaves on very short petioles; leafets oblong, blunt, mucronated, their upper surface smooth, under surface covered with silken down, especially the edges and midrib. Racemes ovate, hardly so long as the leaves, but projecting beyond them on axillary footstalks. Calyx leaves long, lanceolate, pointed, hairy enclosing the pods.—September.

HEDYSARUM HIRTUM. *L.* *Hairy Hedysarum.*

Leaves ternate, round-elliptic; stipules subulate; racemes axillary, oblong, longer than the leaves; loments of one joint, hairy. *Willd.*

Syn. LESPEDEZA POLYSTACHYA. *Mich.*

More frequent in woods than the last; resembling it in colour and habit. Stems simple, shrub like, whitish, hairy, two or three feet high. Leaves on very short, scattered stalks; leafets oval, obtuse, whitish and hairy underneath. Racemes ovate, exceeding the leaves, on hairy stalks which considerably exceed their own length. Calyx shorter than in the last species, about equal to the corolla, or to the pods, which are ovate, hairy, and pointed.—September.

HEDYSARUM RETICULATUM. *Muhl.* *Reticulated Hedysarum.*

Leaves ternate, linear, hairy underneath; racemes axillary; loments of one joint, ovate, reticulated, longer than the calyx. *Willd.*

Syn. LESPEDEZA SESSILIFLORA. *Mich.*

Stem erect, slightly pubescent. Petioles slender, some-

what hairy. Leafets small, oblong, obtuse at both ends, mucronated, pubescent underneath. Flowers small, violet coloured, in axillary bunches.—Woods.—August.

HEDYSARUM VIOLACEUM. *L.* *Violet Hedysarum.*

Leaves ternate, elliptical, obtuse; racemes umbelled, as long as the petiole; flowers in pairs; loments of one joint, rhomboidal, reticulated, glabrous. *Willd.*

Stem erect. Leafets small, oval, mucronated, nearly smooth. Flowers numerous, violet coloured, growing mostly in pairs, forming racemes which are somewhat umbelled. Pods one seeded, flat, smooth, rhomboidal.—Woods.—Brighton.—August.

HEDYSARUM DIVERGENS. *Muhl.* *Spreading Hedysarum.*

Leaves ternate, oblong, obtuse; racemes longer than the petiole; flowers in pairs; loments of one joint, ovate, reticulated, glabrous. *Willd.*

Stem erect, nearly smooth. Leafets, narrow, oblong, obtuse at both ends. Flowers violet coloured, in axillary racemes, the uppermost of which are somewhat longer than the petioles of the leaves, the lower ones short, and few flowered. The plant has many axillary branches with small leaves and flowers. Pods oval, acute, flat, one seeded.—Woods.—August.

HEDYSARUM ROTUNDIFOLIUM. *Mich.* *Round leaved Hedysarum.*

Stem prostrate, hairy; petioles hairy; stipules round-heart shaped, reflexed; leaves ternate, orbicular, hairy on both sides; racemes few flowered; joints of the loment subrhomboidal. *Mich.*

Stem trailing, moderately hairy. Leaves on hairy stalks,

leafets round, pale underneath, ciliate at the lower edge, with a few fine hairs on both surfaces, from one to two inches in diameter. Stipules of the leafets small, lanceolate; of the leaves ovate, acuminate, bent backward; both hairy. Racemes axillary and terminal, few flowered. Peduncles longer than the petioles, nearly smooth. Flowers purple. Corolla twice as long as the calyx.—Woods.—Waltham.—August.

HEDYSARUM NUDIFLORUM. *L.* *Naked flowering Hedysarum.*

Leaves ternate, roundish-ovate, acuminate; scape panicled, smooth, radical; joints of the loment roundish-triangular, somewhat smooth. ***Willd.***

This is a remarkable species. The flower stalk stands by itself, and seems to constitute a distinct, leafless plant. On pulling it out of the ground, the root is found to be connected with a leafy stem, which is frequently at some distance from the scape. Leaves at the top of the stem on long stalks, nearly smooth, whitish underneath, ovate, with a short point. Scape smooth, slender, longer than the stem. Flowers purple, in a panicle or raceme, on capillary stalks.—Woods.—August.

HEDYSARUM ACUMINATUM. *Mich.* *Pointed Hedysarum.*

Erect, simple, leafy at top; leaves ternate, oval, long-acuminate, the odd one round-rhomboidal; panicle terminal, on a very long peduncle. ***Mich.***

A larger plant than the last, which it resembles in habit. Leaves on long stalks from the top of the stem, green above, paler underneath; the side leafets ovate, the terminal one larger, broad, roundish, three inches in diameter; all ending in a long point. Panicle very long, proceeding from the top of the stem above the leaves. Peduncles nearly glabrous, with slender, remote branches. Flowers purple. Loments of two or three slightly connected joints. These are large, triangular,

rounded in front, and hollowed out at top, their two posterior angles very acute, the anterior obtuse.—On the Concord turnpike, near Fresh Pond.—July, August.

HEDYSARUM CANADENSE. *L.* *Canadian Hedysarum.*

Leaves ternate, oblong-lanceolate; stipules filiform; flowers racemed; joints of the loment obtusely triangular, hispid. ***Willd.***

A tall, handsome species, flowering in July. Stem erect, striate, hairy. Leaves ternate. Leafets long and narrow, broadest at base, gradually tapering to the point, which is not very acute. Racemes from the top of the stem and axils of the upper leaves. Pods hairy, consisting of four or five joints, which are imperfectly triangular, their sides curved, and their angles obtuse.—Woods.—Perennial.

212. GLYCINE.

GLYCINE MONOICA. *L.* *Pea vine.*

Leaves ternate, naked; stems hairy; fertile flowers without petals. ***L.***

A very delicate wood vine, twining upon the bushes, and flowering in July and August. Stem slender, covered with minute hairs pointing backward. Leaves in threes, ovate, acute, smooth, and very thin. Flowers monœcious, the barren ones in small, axillary, pendulous racemes, with the calyx and corolla nearly white. Legumes short, flattish, pointed.—Annual.

GLYCINE APIOS. *L.* *Tuberous Glycine. Ground nut.*

Leaves pinnate, with seven ovate-lanceolate leafets; racemes shorter than the leaves; stem herbaceous, twining. ***Willd.***

Not unfrequent in moist woods and thickets. Root tuber-

ous, consisting of fleshy, oval knobs, tapering at the ends, arranged at certain distances, like beads, on a principal running root. Stems round, twining. Leaves pinnate, consisting of five or seven ovate, acuminate, smooth leafets. Flowers in axillary racemes, blackish purple, crowded, and not inelegant in their appearance.—July, August.—Perennial.

213. MEDICAGO.

MEDICAGO LUPULINA. *L.* *Nonesuch.*

Spikes ovate; pods kidney shaped, veiny, rugged, single seeded, stems procumbent. *Sm.*

Occurs frequently by road sides, in pastures, &c. Stems spreading, angular, leafy. Leaves resembling clover, but smaller. Leafets obovate, finely toothed. Spikes or heads ovate, of yellow flowers. The pods are black and rugged, with an evident spiral or cockle like structure, which characterizes the genus. When cultivated it is said to form a valuable grass, especially for sheep. In its wild state however its size is rather insignificant.—Flowers all summer.—Biennial.

Class XVIII. POLYADELPHIA. *Stamens united in more than two sets.*

Order IV. *POLYANDRIA. Many stamens.*

214. HYPERICUM. Calyx five parted, inferior; petals five; styles one, three, or five; capsules many seeded.

POLYADELPHIA.

POLYANDRIA.

214. HYPERICUM.

HYPERICUM PERFORATUM. *L.* *Common St. John's wort.*

Flowers with three styles; stem two edged; leaves obtuse, with pellucid dots; calyx leaves lanceolate. *Sm.*

A hardy and very common weed in pastures and dry soils. Stems numerous, erect, round, with a slight, prominent line on each side, brachiate. Leaves opposite, oblong-oval, entire, paler beneath, covered with small, transparent dots, which when held against the light appear like perforations. Flowers numerous, terminal, bright yellow. Petals oval; stamens numerous; styles three.—July, August.—Perennial.

HYPERICUM CANADENSE. *L.* *Canada St. John's wort.*

Flowers with three styles, axillary, pedunculated, solitary; leaves sessile, linear, narrowed at base; stem herbaceous, square, dichotomous above. *Willd.*

A small species, generally frequenting a soil which is somewhat moist. Stem round, with four prominent lines, formed by the decurrent base of the leaves. Lower branches opposite, upper ones in forks. Leaves linear-lanceolate, with transparent dots. Flowers axillary and terminal, small, yellow, on short pedicels. Capsules of a brownish colour, twice as long as the calyx.—July, August.—Annual.

HYPERICUM VIRGINICUM. *L.* *Virginian St. John's wort.*

Flowers with three styles, enneandrous, terminal; leaves elliptical, obtuse, somewhat heart-shaped, clasping; stem herbaceous, compressed. ***Willd.***

This plant has much larger leaves than the preceding species. They are opposite, oblong, smooth, entire, heart-shaped at base, closely sessile or clasping, very obtuse, paler on the under side. Flowers in terminal bunches, their colour partaking of a mixture of yellow and purple. Stamens nine, united in three parcels.—In low ground.—August.—Perennial.

Class XIX. SYNGENESIA. *Anthers united into a cylinder; flowers compound.*

Order I. *ÆQUALIS. All the florets with stamens and pistils, and all fertile.*

A. *Semifloscular, all the florets ligulate.*

215. CICHORIUM. Receptacle chaffy; calyx invested with scales; seeds surrounded with numerous short teeth.

216. APARGIA. Receptacle naked; calyx imbricate; down feathery, sessile.

217. LEONTODON. Receptacle naked; calyx imbricate, with flaccid scales; down simple, pedicelled.

218. PRENANTHES. Receptacle naked; down simple; calyx invested with scales; florets few, in one row.

219. LACTUCA. Receptacle naked; down simple, pedicelled; calyx imbricate, cylindrical, scarious at the margin.

220. HIERACIUM. Receptacle naked, dotted; down simple, sessile; calyx imbricate, ovate.

221. SONCHUS. Receptacle naked; down simple, sessile; calyx imbricate, swelling at the base.

B. *Flowers in heads.*

222. ARCTIUM. Receptacle chaffy; down

bristly and chaffy; corolla floscular; calyx globular with hooks on the top of the scales.

223. CNICUS. Receptacle villous; down feathery; corolla floscular; calyx swelling, with spinous scales.

224. ONOPORDON. Receptacle cellular; down capillary; corolla floscular; calyx swelling with spinous scales.

225. VERNONIA. Receptacle naked; down double, the outer chaffy, inner capillary; corolla floscular; calyx ovate, imbricate.

C. *Florets tubular.*

226. BIDENS. Receptacle chaffy, flat; seeds angular; down consisting of awns prickly backward; calyx nearly equal, invested with leaves.

227. MIKANIA. Receptacle naked; down simple; calyx four or six leaved, and four or six flowered.

228. EUPATORIUM. Receptacle naked; down simple or rough; calyx imbricate, oblong; style longer than the corolla, cloven half way down.

Order II. *SUPERFLUA. Florets of the disc with stamens and pistils, those of the ray with pistils only; all fertile.*

229. CONYZA. Receptacle naked; down simple or rough; calyx imbricate, roundish; florets of the margin three cleft.

230. GRAPHALIUM. Receptacle naked; down feathery or rough; calyx with scarious, coloured scales; florets of the margin subulate.

D. *Flowers radiate.*

231. CHRYSANTHEMUM. Receptacle naked; down none; calyx hemispherical, imbricate, with the scales dilated, and membranous at the margin.

232. ERIGERON. Receptacle naked; down simple; florets of the margin very numerous and narrow, linear.

233. SOLIDAGO. Receptacle naked, pitted; down simple; florets of the margin from five to ten, remote; calyx imbricate, closed.

234. SENECIO. Receptacle naked; down simple; calyx invested with scales, many leaved, equal; the scales dead at their tips.

235. ASTER. Receptacle naked; down simple; calyx imbricate, with the lower scales spreading; florets of the margin commonly more than ten.

236. ANTHEMIS. Receptacle chaffy; seeds crowned with a slight border; calyx hemispherical; florets of the ray more than five, oblong.

237. ACHILLEA. Receptacle chaffy; down none; calyx ovate, imbricate, unequal; florets of the ray from five to ten, inversely heart-shaped or roundish.

Order III. *FRUSTRANEA. Florets of the centre with stamens and pistils, fertile; those of the ray with pistils only, barren.*

238. HELIANTHUS. Receptacle chaffy; seeds crowned with two lanceolate, chaffy scales; calyx imbricate, somewhat squarrous.

239. COREOPSIS. Receptacle chaffy; seeds

compressed, emarginate, with two unarmed awns; calyx double, each many leaved.

Order IV. *NECESSARIA. Florets of the centre with stamens and pistils, barren; those of the ray with pistils only, fertile.*

240. IVA. Receptacle hairy; seeds naked, obtuse; down none; calyx three leaved; florets of the ray five.

SYNGENESIA.

ÆQUALIS.

215. CICHORIUM.

CICHORIUM INTYBUS. *L.* *Succory.*

Flowers in pairs, sessile; leaves runcinate.

The large, blue flowers of this elegant plant are extremely common in pastures and road sides every where in the vicinity of Boston. Stem two or three feet high, strong, angular, bristly. Leaves roughish, the radical ones runcinate, those of the stem heart-shaped, acuminate, and sessile. Flowers mostly in pairs, sessile upon the sides of the stem. Calyx leaves erect, rough on the back, reflexed as they grow old. Florets of the corolla ligulate, ending in about five minute teeth.—From July to September.—Perennial.

216. APARGIA.

APARGIA AUTUMNALIS. *Willd.* *Autumnal Hawkweed.*

Scape branching, peduncles scaly; leaves lanceolate, tooth-pinnatifid, smoothish. *L.*

Syn. *LEONTODON AUTUMNALE. L.*
HEDYPNOIS AUTUMNALIS Sm.

This plant, probably an emigrant from Europe, has overrun the vicinity of this place, and grows in almost every kind of soil. It begins flowering in June and July, and is nearly the last plant that yields to the frosts of November. Root abrupt. Leaves all radical, spreading, lanceolate, more or less toothed and pinnatifid, according to the soil in which they grow, usually curving to one side. Scape spreading, bending upwards,

furrowed, branching into a few peduncles, which are furnished with scattered, remote scales, and are hollow, like many others of the class, with a minute tuft, like cotton or cobweb, at the base of their cavity within. Flowers yellow, resembling those of the dandelion. The scales on the stalks and calyx are less numerous than in the European variety.

217. LEONTODON.

LEONTODON TARAXACUM. *L.* *Dandelion.*

Outer scales of the calyx reflexed; leaves runcinate, toothed, smooth.

The leaves of this very common plant are usually cited as examples of the runcinate form. The supposed resemblance to a lion's teeth will appear sufficiently obvious, to those who are fond of tracing etymologies, in any of its names, *leontodon*, *dens leonis*, *dent de lion*, *dandelion*. The stalks or scapes are simple, hollow, smooth, and round. Flowers single, of a bright yellow. Calyx leaves entire, the outermost bent backwards. Florets ligulate, numerous. Down of the seeds on a pedicel.—Perennial.

218. PRENANTHES.

PRENANTHES ALBA. *L.* *White flowering Prenanthes.*

Calyxes many flowered; leaves angular-hastate, toothed; flowers nodding; racemes panicled. ***Willd.***

A tall, lactescent plant, flowering in August and September. The large, radical leaves are conspicuous much earlier in the season. They are more or less triangular or halberd shaped, and toothed or lobed. The leaves of the stem are more regularly ovate and toothed, the upper ones lanceolate. The stem is commonly of a dark reddish colour, three or four feet high. Flowers panicled, drooping; calyx white, containing ten or a

dozen florets, surrounded with a dull reddish down.—Woods, low land, &c.—Perennial.

219. LACTUCA.

LACTUCA ELONGATA. *Muhl.* *Tall Lettuce. Fire weed.*

Leaves smooth, the lower ones runcinate, clasping; the upper ones lanceolate, sessile; flowers panicled.

This plant, I am informed, is sure to appear in great abundance on grounds which are newly burnt over, and on this account it has received the name of *Fire weed* in the interior. The whole plant is lactescent. Stem erect; four or five feet high. Lower leaves long, spreading, runcinate, clasping the stem. Upper leaves sessile. The stem terminates in a large, spreading panicle of yellow flowers, which remain expanded but a short time.—July.—August.

220. HIERACIUM.

HIERACIUM VENOSUM. *L.* *Veiny leaved Hawkweed.*

Scape naked, branching; calyx smooth; leaves obovate, somewhat acute, entire, ciliate, their veins coloured. ***Willd.***

A singular and beautiful plant, found upon dry hills and pastures. Leaves radical, spreading on the ground, narrow-obovate, elegantly variegated with dark red veins and dots, downy underneath, somewhat ciliate, tapering into a short, hairy petiole. Scape erect, slender, one or two feet high, of a dark brown colour, smooth, commonly naked, but sometimes furnished with a small leaf or two. Flowers panicled, on very slender stalks, yellow.—June, July.—Perennial.

HIERACIUM KALMII. *L.* *Kalm's Hawkweed.*

Stem erect, many flowered; leaves lanceolate, toothed; peduncles downy. *L.*

Stem erect, tall, nearly smooth, downy at top. Leaves alternate, subsessile, oval-lanceolate, acuminate, with acute, diverging teeth. Flower stalks axillary and terminal, round, covered with whitish down. Flowers erect, yellow. Calyx somewhat downy.—Borders of fields.—August.—Perennial.

221. SONCHUS.

SONCHUS OLERACEUS. *L.* *Common Sow-thistle.*

Peduncles downy; calyx smooth; leaves runcinate, toothed. *Sm.*

Appears late in the season, in every species of waste ground and rubbish. Stem erect, three feet high, round, smooth, brittle, hollow. Leaves smooth, toothed and lobed in a runcinate manner, clasping the stem, their lobes bordered with teeth or spines. Peduncles axillary and terminal, covered with a white, fine, deciduous down. Calyx smooth, swelling out at base. Corolla yellow. Flowers about half the size of the dandelion. Down fine and smooth.—September.—Annual.

222. ARCTIUM.

ARCTIUM LAPPA. *L.* *Burdock.*

Leaves heart-shaped, unarmed, petioled. *L.*

No plant is better known than this. Its very large, heart-shaped, wavy leaves cover the ground for some extent around it. The stem, which rises three or four feet, is branching, round, furrowed, and rough. Flowers numerous, terminal, purple. This plant intrudes itself on every one's acquaintance by the sharp, firm hooks at the end of the calyx scales, which attach themselves to the clothes, and serve as a remarkable me-

chanism for dispersing the seeds.—Common in waste and cultivated ground.—July, August.—Perennial.

223. CNICUS.

CNICUS ARVENSIS. *Willd.* *Canada Thistle.*

Leaves sessile, pinnatifid, spinous; stem panicled; calyx ovate, its spines minute; down feathery. ***Sm.***

Syn. *CARDUUS ARVENSIS. Sm.*
SERRATULA ARVENSIS. L.

This species is easily distinguished from the rest of our thistles by its small flowers, and its thornless calyx scales. It commonly forms beds by its perennial, creeping roots, and is exceedingly difficult to extirpate. The stems are two or three feet high, smooth, many flowered. Leaves alternate, sessile, pinnatifid, with numerous lobes, and very thorny. Flowers terminal, purple; the scales of the calyx ending in a short, weak bristle, rather than a spine. This plant seems to have come to us from the westward, where it is exceedingly troublesome. The name of Cursed thistle has been given it in England.—July.

CNICUS LANCEOLATUS. *Willd.* *Spear Thistle.*

Leaves decurrent, pinnatifid, hispid; the segments divaricate; calyx ovate, villous; stem hairy. ***Sm.***

Syn. *CARDUUS LANCEOLATUS. L.*

Very common by road sides and in waste ground, usually three or four feet in height. Stem upright, furrowed, hairy, and winged by the decurrent base of the leaves. Leaves white and woolly underneath, pinnatifid, half the lobes divaricated, tipt with long and very acute spines. Flowers terminal, purple, numerous, above the middle size. Calyx ovate, contracted to

a small neck, its scales tipt with sharp, ascending spines, and connected with a downy web. Receptacle hairy. Seed down feathery.—Flowers from June to September.—Biennial.

224. ONOPORDON.

ONOPORDON ACANTHIUM. *L.* *Cotton Thistle.*

Calyx scales spreading every way, awl shaped; leaves ovate-oblong, sinuated, woolly on both sides. *Sm.*

Frequent in waste grounds, and readily distinguished from the other thistles by its white appearance and the large size of its leaves. Stem erect, tall, winged by the decurrent base of the leaves. Leaves oblong, broad, sinuated, toothed, and spinous, covered on both sides with a loose, white, cottony substance. Flowers purple. Calyx globose, wider than it is long, with lanceolate, spreading, cottony, spinous scales. Receptacle cellular, like a honey comb. Down rough, short. The Cotton thistle was probably introduced from Europe.—It flowers in July and August.

225. VERNONIA.

VERNONIA NOVEBORACENSIS. *Willd.* *Vernonia.*

Leaves lanceolate, rough, serrulate; corymb fastigiate; scales of the calyx filiform at top. *Willd.*

Syn. SERRATULA NOVEBORACENSIS. *L.*

A tall plant, bearing a multitude of dark purple flowers, which turn nearly black in decay. Stem about four feet high, furrowed, purplish, branching at top. Leaves peduncled, lanceolate, finely serrate, acuminate, paler underneath. Flowers terminating the stem and branches, in a compound, flat topped corymb. Scales of the calyx ending in a fine slender awn.—Found in moist situations.—September.—Perennial.

226. BIDENS.

BIDENS FRONDOSA. *L.* *Burr marygold.*

Flowers discoid; outer calyx six times as long as the flower, its leaves ciliate at base; lower leaves pinnate, upper ones ternate, lanceolate, serrate. *Willd.*

A frequent and troublesome weed in corn fields, especially where the soil is moist. Stem smooth, three or four feet high. Lower leaves five-pinnate, sometimes ternate, leafets lanceolate, serrate. Flowers terminal, erect, flosculous, surrounded by a large, leafy involucrum or outer calyx. Florets small, yellow. Seeds oblong, flat, tipt with two barbed awns, by which they adhere to the clothes, and to the coats of animals.—August, September.—Annual.

BIDENS CRYSANTHEMOIDES. *Mich.* *Large flowered Bidens.*

Flowers erect, radiate; outer calyx waved, much shorter than the ray; leaves lanceolate, serrate, connate.

The large, golden flowers of this plant are very conspicuous in wet situations in autumn. Its tops are usually eaten off when accessible to cattle, who appear fond of it. Stem erect, round, smooth. Leaves glabrous, lanceolate, slightly toothed, tapering at both ends, slightly connate at base. Flowers erect. Leaves of the outer calyx oblong, obtuse, waved up and down on the margin; those of the inner calyx shorter, oval, acute. Ray very large, spreading, yellow. Seeds with commonly four awns, in which circumstance our plant seems to differ from that of Michaux.—September, October.—Annual.

227. MIKANIA.

MIKANIA SCANDENS. *Willd.* *Climbing Mikania.*

Stem climbing, glabrous; leaves heart-shaped,

repand-toothed, acuminate, the lobes divaricate, unequal; flowers corymbed. ***Willd.***

Syn. *EUPATORIUM SCANDENS. Mich.*

Stem twining, smooth. Leaves opposite, on long petioles, glabrous, somewhat triangular or halberd shaped, their lower half toothed, the upper tapering into a long, even, and very acute point. Branches opposite, axillary, bearing small, terminal, corymbs. Flowers purplish white. Calyx with about four leaves, and as many florets.—Wet places.—August, September.—Perennial.

228. EUPATORIUM.

EUPATORIUM SESSILIFOLIUM. *L.* *Sessile leaved Eupatorium.*

Leaves sessile, clasping, distinct, ovate-lanceolate, rounded at base, serrate, smooth; stem smooth. ***Willd.***

An erect plant with corymbed flowers, as are all the subsequent species. Stem slender, smooth. Leaves opposite, closely sessile, circular at base, tapering to a very long, acute point, furnished with small teeth or serratures, and paler underneath. Peduncles downy. Flowers white, in a terminal corymb. Calyx containing about five florets.—Found in the woods at Roxbury.—August.—Perennial.

EUPATORIUM VERBENÆFOLIUM. *Mich.* *Vervain leaved Eupatorium.*

Leaves sessile, lance-oval, acute, obtusely cut-toothed, pubescent; calyxes pubescent, awnless, five flowered. ***Mich.***

The name is taken from the resemblance of the leaves to the upper ones of the officinal Vervain. Stem round, downy at top. Leaves opposite, closely sessile, pointing upward, rounded at

base, acute, but not acuminate like the last, the sides cut into very large, and rather blunt teeth. Corymb compound, terminal, pubescent. Flowers white.—Grows at Cambridgport and elsewhere, in low ground.—August, September.—Perennial.

EUPATORIUM PERFOLIATUM. *L.* *Thoroughwort. Boneset.*

Leaves connato-perfoliate, downy. *L.*

Syn. EUPATORIUM CONNATUM. Mich.

This species is readily known from the rest by its long, acute leaves, alternately crossing, and perforated by the stem. The plant is usually from two to four or five feet in height. Stem erect, hairy or woolly, branching only at top. Leaves connate, tapering to an acute point, serrate, wrinkled, whitish and woolly underneath. The upper leaves are often found distinct at their base, not connate. Flowers white, in a large corymb, with woolly peduncles. Calyx containing ten or more florets. Grows in moist land and flowers in August and September. This plant has acquired great medicinal reputation, and is considerably employed as a tonic, sudorific, and emetic. —Perennial.

EUPATORIUM PURPUREUM. *L.* *Trumpet weed.*

Leaves petioled, four or five in a whorl, ovate-lanceolate, serrate, wrinkled and veiny, somewhat rough; stem fistulous. *Willd.*

A tall plant, growing about the borders of thickets in wet land. Stem five or six feet in height, straight, round, purplish, hollow throughout its whole length, its tube not being interrupted by joints. Leaves in whorls of four, five, or six; ovate, rugged with veins, acute. Flowers purple, in a large, branching, terminal corymb. Calyx containing about eight florets, with very long styles.—August, September.—Perennial.

EUPATORIUM VERTICILLATUM. *Muhl.* *Whorled Eupatorium.*

Leaves petioled, in whorls of three or four, ovate-lanceolate, wedge-shaped at base, unequally serrate, smoothish; stem solid, smooth. ***Willd.***

Syn. *EUPATORIUM PURPUREUM. Mich.*

A very tall species, much resembling the last in habit. Stem smooth, round. Leaves about four in a whorl, large and spreading, serrate, the lower part entire, and tapering to the petiole. Flowers in a large, terminal corymb. Flowering branches also proceed from the axils of the upper leaves. Calyx whitish. Corollas purplish.—Wet thickets.—August, September.—Perennial.

SUPERFLUA.

229. CONYZA.

CONYZA CAMPHORATA. *Muhl.* *Spicy Conyza.*

Leaves ovate-lanceolate, somewhat pubescent, acute, serrate, serratures mucronate; flowers in crowded corymbs.

Syn. *ERIGERON CAMPHORATUM. L.*
CONYZA MARILANDICA. Mich.

An erect, rather succulent plant, of low stature. Stem thick, fleshy, pubescent. Leaves alternate, sessile, ovate. Branches axillary, leafy, bearing close corymbs of oblong, purple flowers. The plant when bruised exhales a strong, spicy, but rather disagreeable odour.—Salt Marshes.—Cambridgeport.—August.

230. GNAPHALIUM.

GNAPHALIUM MARGARITACEUM. *Common Life everlasting.*

Herbaceous; leaves linear lanceolate, acumin-

ate, alternate; stem branched at top; corymbs fastigiate. *L.*

No object in the fields is better known than the dry, pearly, and almost incorruptible heads of the Life everlasting. The whole plant has a white appearance derived from its downy covering. Stem erect, round, from one to two feet high, woolly. Leaves numerous, sessile, growing without order round the stem, green above, white with very thick down, or wool, underneath. Branches forming a flat topped corymb of crowded flowers. Calyx hemispherical, its scales of a clear white. Florets five cleft, yellow. The plant has a peculiar and rather pleasant odour.—August.—Perennial.

GNAPHALIUM PLANTAGINEUM. *L.* *Mouse ear.*

Shoots procumbent; stem simple; radical leaves oval, obtuse, mucronated, three nerved; flowers dicœcious.

This species flowers early, and is pretty common in pastures and dry hills. The whole plant is at first covered with white, cotton-like down. The root sends out a number of runners furnished with oval leaves, exceeding the rest considerably in size, rounded at the end, and tapering into a footstalk. Their upper surface is at first downy, but becomes nearly glabrous, and of a dark brown colour. Stem leaves oblong, woolly, sessile. Stem undivided, terminating in a simple corymb of white, woolly flowers.—April, May.—Perennial.

GNAPHALIUM ULIGINOSUM. *L.* *Cudweed.*

Stem herbaceous, branching, diffuse, woolly; leaves linear-lanceolate, narrowed at both ends, downy; flowers terminal, crowded. *Willd.*

A small, branching, whitish plant. Stems spreading, subdivided, covered with white, woolly down. Leaves alternate,

linear-lanceolate, less woolly than the stem. Flowers in dense, terminal corymbs or heads. Scales of the calyx yellowish. Road sides.—August.—Annual.

231. CHRYSANTHEMUM.

CHRYSANTHEMUM LEUCANTHEMUM. *L.* *White weed.*

Leaves clasping, oblong, blunt, cut, pinnatifid at base; the radical ones on footstalks, obovate. ***Sm.***

This plant, which has come to us, no doubt, from Europe, is exceedingly frequent and troublesome in pastures and mowing land. Stems about two feet high, round, furrowed. Lower leaves petioled, inversely ovate, serrate, and cut; upper ones sessile, irregularly pinnatifid and toothed. Flowers terminal, solitary, large, and flat. Calyx closely imbricated. Disc yellow; ray white, consisting of many oval, oblong ligules, ending in three teeth.—June, July.—Perennial.

232. ERIGERON.

ERIGERON CANADENSE. *L.* *Annual Flea-bane.*

Stem hairy; flowers panicled; leaves lanceolate, lower ones serrate. ***Sm.***

One of the most hardy and common annual weeds. It propagates itself rapidly, and since the discovery of America, has been introduced, and spread through most countries in Europe. Stem erect, furrowed, very hairy, branching. Leaves linear-lanceolate, edges rough and ciliate. Flowers small, of no beauty, very numerous, arranged in a sort of racemes on the branches. Calyxes cylindrical, longer than they are wide, somewhat imbricate. Ray very short and obscure, white, crowded, erect. In pastures, road sides, and cultivated grounds, varying in height from one to four feet, according to the soil.—August.

ERIGERON PHILADELPHICUM. *L.* *Philadelphia Flea-bane.*

Stem many flowered; leaves lanceolate, subserrate, those of the stem half clasping; florets of the ray capillary, as long as the disc. *L.*

Stem erect, two or three feet high, much branched at top, the branches somewhat downy. Leaves lanceolate or oblong, sessile and partly clasping, the lower ones somewhat toothed. Flowers numerous, panicled, erect. Calyx flattened or hemispherical. Florets of the margin very numerous and fine, white with a purplish cast.—Common by road sides, flowering in July and August.—Perennial.

233. SOLIDAGO.

SOLIDAGO LANCEOLATA. *L.* *Spear leaved Golden rod.*

Stem glabrous, branching; leaves lance-linear, entire, three nerved, glabrous; corymbs terminal; ligules as high as the disc. *Ait.*

This species of golden rod is distinguished from the succeeding, by its inflorescence. Stem tall, leafy, branching. Leaves numerous, long, and narrow, marked for their whole length with three distinct nerves, very rough on the edge. Flowers yellow, in large, flat topped corymbs, composed of small heads. Ray very short and obsure. The whole plant is pleasantly aromatic.—Woods and road sides, in low ground.—August, September.—Perennial.

SOLIDAGO ALTISSIMA. *L.* *Tall Golden rod.*

Stem erect, hairy; leaves lanceolate, the lower ones deeply serrate, rough, wrinkled; panicle leaning to one side. *Willd.*

The varieties of this tall, well known weed, are pretty frequent about the borders of fields. Stem erect, stiff, rough, and

hairy, branching at top. Leaves numerous, sessile, lanceolate, rough, irregularly veined, serrate or toothed, the serratures divergent. Panicle consisting of many recurved branches, with the flowers tending upward; the whole inclining to one side. Flowers numerous, yellow.—September.—Perennial.

SOLIDAGO CÆSIA. *Ait.* *Blue stemmed Golden rod.*

Stem glabrous; leaves lanceolate, acuminate, serrate, glabrous, paler underneath; racemes axillary.

An elegant species, remarkable for the brightness and variety of its colours. Stem slender, smooth, of a dark bluish colour, somewhat flexuous. Leaves alternate, lanceolate, tapering to a long point, smooth, green above, pale, and somewhat glaucous underneath. Racemes numerous, situated, one in the axil of each leaf, for a great length upon the stem. Flowers of a very bright and durable yellow.—Woods.—September.—Perennial.

SOLIDAGO LÆVIGATA. *Ait.* *Marsh Golden rod.*

Stem erect, smooth; leaves lanceolate, fleshy, entire, smooth in all parts; racemes panicled, erect; peduncles scaly, villous; ligules elongated. *Ait.*

A tall, rank inhabitant of the borders of salt marshes, where its large, yellow tops are very conspicuous in September. Stem thick, round, smooth, leafy, from four to six feet high. Leaves thick, fleshy, perfectly smooth, and without serratures. Racemes numerous, crowded, somewhat recurved. Flowers large, yellow, the ligules of the ray nearly as long as the disc.—Perennial.

SOLIDAGO BICOLOR. *L.* *White Golden rod.*

Stem and leaves hairy; leaves elliptical, the

lower ones serrate; branches bearing leafets; racemes erect; calyx leaves obtuse. *Ait.*

This species differs considerably in its aspect from the preceding. Stem erect, nearly simple, pubescent, especially toward the top. Leaves sessile, lance-oval, rough, somewhat hairy. Racemes axillary, crowded, numerous. Flowers small, without beauty. Disc yellow. Ray very short, obscure, white. —Dry woods.—Cambridge.—Perennial.

234. SENECIO.

SENECIO VULGARIS. *L.* *Common Groundsel.*

Flowers without ray, scattered; leaves pinnate-sinuate, clasping, toothed. *Sm.*

A weed about houses, rubbish, and cultivated grounds. Stem erect, branching, leafy, smooth. Leaves alternate, pinnatifid, and toothed, those of the stem clasping. Flowers terminal, scattered, yellow. Calyx somewhat cylindrical, calyculated, scaly, the scales acute and black at the tip. Flowers floscular. Down sessile, white.—All summer.—Annual.

SENECIO HIERACIFOLIUS. *Mich.* *Hawkweed Groundsel.*

Flowers without ray; leaves clasping, oblong, acute, unequally torn and serrated; calyxes oblong, smooth, bristly at base.

A rank, tall, annual plant. Stem three feet high, fleshy, succulent, branching at top. Leaves large, clasping the stem, deeply and irregularly divided, and acutely toothed. Flowers terminal, erect, crowded. Calyx cylindrical, its base swelling, and invested with many small leaves or bristles. Florets small, pale, gradually filling the calyx. The whole plant has a strong, nauseous odour.—Road sides.—August, September.—Annual.

SENECIO AUREUS. *L.* *Golden Senecio.*

Flowers radiate; leaves crenate, the lower ones heart-shaped, petioled; the upper ones pinnatifid, lyrate. *L.*

This is a handsome species, and makes a fine appearance in meadows, in May and June. Stem upright, simple, smooth, from one to three feet high. Leaves of the root on slender footstalks, heart-shaped, rounded, crenate, smooth; middle leaves of the stem lyrate and crenate; upper ones pinnatifid. Corymb terminal, somewhat umbelled, the flower stalks thickening upward. Calyx smooth, dark, often striped. Flowers yellow. Ligules oblong, spreading.—Perennial.

235. ASTER.

ASTER SOLIDAGINEUS. *Mich.* *White topped Aster.*

Leaves linear-lanceolate, obtuse, entire, obsoletely three nerved, rough on the margin; corymb fastigiate; flowers sessile, aggregate, five rayed.

Syn. CONYZA LINIFOLIA. *L.*

An early species, with white flowers. Stem simple, smooth. Leaves oblong, narrow, obtuse at the end, tapering at base, glabrous, with the margin rough. Flowers in a flat topped corymb, collected in sessile tufts. Calyx oblong, imbricated, the scales obtuse, whitish, with green tips. Ligules of the ray oblong, white, five in number, by which circumstance the plant varies from its genus.—Woods.—July.—Perennial.

ASTER LINARIIFOLIUS. *L.* *Savoury leaved Aster.*

Leaves linear, entire, mucronated, rough, carinated; peduncles leafy. *L.*

A rough, woody plant, growing in bunches, about a foot high. Stems decumbent, rigid, purplish, covered with white

down. Leaves numerous, linear, obtuse, with a small point, very rough and rigid, upright, but reflexed as the plant grows old, without nerves or dots. Peduncles few, near the top, alternate, short, furnished with small leaves, one flowered. Flowers purple.—Woods and dry hills.—August, September.—Perennial.

ASTER SUBULATUS ? *Mich.* *Sea side Aster.*

Leaves linear-subulate, entire, glabrous; stem glabrous, panicled, many flowered; calyxes cylindrical, ligules of the ray minute.

A native of the salt marshes. Stem erect, round, very smooth, with numerous large, alternate branches. Stem leaves long, linear, smooth, tapering to an acute point. Branches axillary, somewhat dichotomous, many flowered. At the base of each principal branch, between it and the leaf, is commonly a smaller branch with two or three flowers. Calyx smooth, oblong. Ray pale and short.—September.—Perennial.

ASTER SALICIFOLIUS. *Ait.* *Willow leaved Aster.*

Leaves linear-lanceolate, entire, glabrous; calyxes imbricated, lax; stem smooth. *Ait.*

A very tall, slender species. Stem five feet high, smooth, somewhat flexuous. Leaves long, linear, acute, entire, sessile, smooth, with a rough edge. Branches alternate, slender, smooth. Flowers on short stalks, blue.—Found in the woods on Concord turnpike, Cambridge.—September.—Perennial.

ASTER CYANEUS. C. *Muhl.* *Blue flowered Aster.*

Leaves ovate-oblong, acute, clasping, cordate, serrate; stem panicled, glabrous; scales of the calyx lanceolate, closely imbricate. *Willd. sub. syn.*

Syn. *ASTER AMPLEXICAULIS. Willd.*

This is one of the most common and beautiful species. Stem erect, perfectly smooth. Leaves oblong, tapering to an acute point, smooth, and even, with a rough edge, slightly serrate about the middle, clasping, the lower ones contracted at base. Branches of the panicle furnished with a few small leafets. Flowers on distinct peduncles, blue.—Borders of woods and fields.—August.—Perennial.

ASTER UMBELLATUS. *Ait.* *Umbelled Aster.*

Leaves lanceolate, entire, narrowed at base, acuminate, rough on the margin; stem simple, corymbed at top; calyx scales lanceolate, lax. *Willd.*

Syn. *ASTER AMYGDALINUS. Mich.*

A very tall, erect species, with white flowers. Stem four or five feet high, furrowed, smooth, sometimes rough at top, leafy. Leaves numerous, large, lanceolate, rough at the edge, paler underneath. Stem branching at top into a large, compound, flat topped corymb. Calyx scales lanceolate, obtuse. Ray of a middle size, white.—In low grounds.—August, September.—Perennial.

ASTER NOVÆ ANGLIÆ. *L.* *New England Aster.*

Leaves lanceolate, clasping, entire, appendaged at base; stem hairy, straight; flowers terminal, crowded; calyx scales loose, coloured, lanceolate, longer than the disc. *Willd.*

A tall, and very beautiful plant. Stem three feet high, brown, very hairy. Leaves very numerous, linear-lanceolate, entire, acute, continued at base into a pair of small, rounded lobes, clasping the stem. Flowers large, on short stalks, crowded at the top of the stem. Calyx scales linear-lanceolate, of a dark brown on the inside. Ray of a deep purple, crowded.—

Road sides, South Boston, Brooklyn, &c.—September—Perennial.

ASTER DIFFUSUS. *Ait.* *Spreading Aster.*

Leaves elliptic-lanceolate, serrate, glabrous; branches spreading; calyxes imbricate, stem pubescent. *Ait.*

A common, bushy Aster, with a profusion of white flowers. Stem branching, slightly pubescent. Branches numerous, long, and slender, spreading, leafy, many flowered. Leaves lanceolate, rough at the edge, slightly serrate in the middle; those of the branches small, entire. Flowers small, very numerous, somewhat racemed, white.—Woods and road sides.—August, September.—Perennial.

ASTER PUNICEUS. *L.* *Red stalked Aster.*

Leaves clasping, lanceolate, serrate, rough; branches panicled; calyx lax, longer than the disc; stem hispid. *Ait. abr.*

A tall, handsome plant. Stem rigid, angular, flexuous, covered with stiff hairs, often, but not always red, three feet high. Leaves lanceolate, somewhat clasping, tapering at both ends, acuminate, furnished with large serratures in the middle, rough on the margin and upper surface. Branches panicled, with blue flowers, rather above the middle size. Calyx leaves uniform.—On the Dedham turnpike, Roxbury, and elsewhere.—September.—Perennial.

ASTER AMPLEXICAULIS. *Mich.* *Clasping Aster.*

Leaves clasping, nearly perfoliate, oblong-heart shaped, not contracted below, entire; panicle lax, few flowered. *Mich.*

Stem erect or ascending, a little downy and rough. Leaves numerous, alternate, rough, somewhat waved on the edge, ob-

long, tapering to a bluntish point, broad at base, and clasping quite round the stem. Branches few, near the top, slender, furnished with several minute, clasping leafets. Flowers erect, somewhat remote, blue.—Woods, Brighton.—September.—Perennial.

ASTER DIVERSIFOLIUS. *Mich.* *Various leaved Aster.*

Leaves downy, slightly serrate and waved, the lower ones oblong-heart shaped, with winged petioles, upper ones oval-lanceolate, clasping; stem hispid, panicled; branchlets leafy, one flowered, tending to one side.

Syn. *ASTER UNDULATUS. Ait.*

This species is remarkable for the gradation of its leaves from one distinct form to another. Stem pubescent, rough. Lower leaves oblong-heart shaped, pointed, serrate, downy underneath, supported on long petioles, which are winged or dilated at the base. Middle leaves panduriform, clasping. Upper leaves ovate or lanceolate, nearly entire, clasping. Panicle lax, with slender branches, covered with small leaves. Peduncles inclining one way. Flowers blue.—August, September.—Perennial.

ASTER CORNIFOLIUS. *Muhl.* *Cornel leaved Aster.*

Leaves oblong-ovate, acuminate, entire, petioled, smooth, rough on the edge; stem smooth, panicle few flowered; calyxes somewhat imbricated. *Willd.*

A pretty early species. Stem erect, glabrous. Leaves on very short petioles, narrow-oval, acute at base, acuminated at point, nearly smooth, the margin rough, and slightly ciliated, the under surface pale. Panicle few flowered. Flowers white.—Found in woods.—July, August.—Perennial.

ASTER CORDIFOLIUS. *L.* *Heart leaved Aster.*

Leaves heart-shaped, hairy beneath, sharply serrate; petioles winged; stem panicled, hairy; calyxes loosely imbricate. *Willd.*

Stem erect, somewhat flexuous, in some plants a little hairy, in others quite smooth. Leaves heart-shaped, with a deep sinus, acutely serrate, acuminate, downy underneath, the lower ones very large. Petioles with a membranous edge. Panicle terminal, many flowered. Flowers small, purplish white.—Woods.—September.—Perennial.

ASTER CORYMBOSUS. *Ait.* *Corymbed Aster.*

Leaves ovate, sharply serrate, acuminate, the lower ones heart-shaped, petioled, naked; stem ending in a fastigiate corymb; branches hairy; calyxes oblong, imbricate, its scales closely pressed. *Willd.*

A pretty large, white flowering plant. Stem smooth, frequently of a dark reddish colour. Lower leaves heart-shaped, petioled, smooth, toothed; upper ones ovate, acuminate, subsessile. Flowers white, in a large, flat topped corymb, the branches of which are slightly pubescent.—Woods and shades, Roxbury, Brooklyn.—August.—Perennial.

236. ANTHEMIS.

ANTHEMIS COTULA. *L.* *May weed.*

Receptacle conical, its scales bristle shaped; seeds without any border; leaves doubly pinnatifid, smoothish. *Sm.*

The road sides are full of the white blossoms of this common, annual weed, from midsummer to the end of autumn. Stem upright, smooth, much branched. Leaves alternate, ses-

sile, nearly smooth, divided and subdivided into linear segments. Flower stalks solitary, striated. Calyx scales narrow, slightly margined. Florets of the ray white, spreading, a dozen or more in number. Disc yellow, convex. Receptacle nearly cylindrical. The plant has a strong, peculiar smell, and reputed medicinal virtues.

237. ACHILLEA.

ACHILLEA MILLEFOLIUM. *L.* *Common Yarrow.*

Leaves bipinnatifid, hairy, their divisions linear, toothed, mucronate; stems furrowed. *Sm.*

Common Yarrow is a frequent inhabitant of dry pastures and fields. Stem erect, furrowed, hairy, branched at top. Leaves alternate, cut into a multitude of very small, linear subdivisions. Flowers white, forming a large, flat topped, crowded corymb. Calyx ovate. Disc convex. Florets of the ray four or five. The plant has a strong, penetrating taste and smell, and is used medicinally.—July, August.—Perennial.

FRUSTRANEA.

238. HELIANTHUS.

HELIANTHUS DIVARICATUS. *L.* *Small, rough Sun flower.*

Leaves opposite, sessile, ovate-oblong, three nerved; panicle dichotomous. *L.*

A shewy plant, not uncommon in woods and thickets, flowering in August and September. Stem erect, round, smooth, generally covered with glaucous powder. Leaves opposite, narrow-ovate, rounded at base, tapering to a long point, slightly serrate, three nerved, and very rough. Flowers yellow, in the wild plant but few in number, in the cultivated one numerous. Branches of the panicle either forked or three parted.—Perennial.

This plant has an agreeable, somewhat spicy odour.

239. COREOPSIS.

COREOPSIS TRICHOSPERMA. *Mich.* *Tickseed Sun flower.*

Leaves mostly five pinnate, leafets lanceolate, remotely cut-serrate; leafets of the outer calyx ciliate; ray entire; seeds wedge form. *Mich. abr.*

Stem about two feet high, glabrous. Leaves glabrous, pinnate. Leafets five or seven, distant, linear-lanceolate, ending in a long, slender point, furnished with a few deep serratures or segments, the larger ones pinnatifid. The branches and leaves are opposite, the upper ones alternate. Flowers large, erect, yellow. Outer calyx leaves about eight, oblong, rounded at the end and fringed with setaceous teeth at the edge. Florets of the ray large, entire.—On the east side of Fresh Pond.—September.

NECESSARIA.

240. IVA.

IVA FRUTESCENS. *L.* *High water shrub.*

Leaves lanceolate, rough, with dots, deeply serrate; stem shrubby. *Willd.*

A fleshy shrub, about the borders of salt marshes. Annual shoots erect, furrowed. Branches axillary, or a little above the leaves. Leaves ovate-lanceolate, serrate, three nerved, somewhat rough, upper ones entire. Flowers in a sort of leafy racemes, small, drooping, green, without beauty.

Class XX. GYNANDRIA. *Stamens situated on the pistil.*

Order I. *MONANDRIA. One stamen.*

241. ORCHIS. Corolla five petalled, the upper petal arched; lip with a spur from its base; anther terminal, parallel and affixed to the style.

242. NEOTTIA. Corolla five petalled; base of the lip swelling, with the external petals joining round it; anther parallel to the style and affixed to it behind.

243. ARETHUSA. Corolla five petalled, somewhat ringent; lip without a spur; anther resembling a lid, persistent.

244. CYMBIDIUM. Corolla five petalled, erect or spreading; lip concave at base, without a spur; anther resembling a lid, deciduous.

Order II. *DIANDRIA. Two stamens.*

245. CYPRIPEDIUM. Corolla four petalled, spreading; lip inflated, hollow; capsule three valved, one celled, many seeded.

GYNANDRIA.

MONANDRIA.

241. ORCHIS.

ORCHIS PSYCODES. *Willd.* *Ragged Orchis.*

Lip three parted, capillary, many cleft; petals obtuse; spur filiform-club shaped, as long as the germ. *Willd.*

Syn. ORCHIS LACERA. *Mich.*

This is our most common species. Stem two feet high, smooth. Leaves oblong, smooth, tapering to a point. Flowers numerous, of a faint yellow, in a large, terminal spike. Germs appearing like flower stalks, very long and slender. Petals five, the three outer ones ovate, the two inner ones oblong. Lip of the nectary reflexed, divided into three narrow, wedge shaped segments, fringed at the end. Spur as long as the germ, curving upward.—Pastures and meadows.—July.—Perennial.

ORCHIS FIMBRIATA. *Ait.* *Fimbriated Orchis.*

Lip three parted, its segments wedge shaped, ciliate-fimbriate; side petals ovate, toothed; spur filiform, longer than the club shaped germ. *Willd.*

A very beautiful plant. Stem two feet high, with several broad-lanceolate, smooth leaves, and ending in a large spike of purple flowers. Germs incurved, thickened in the middle. Petals five, spreading. Lip of the nectary somewhat exceeding the petals, divided into three segments, which are wedge shaped, wider than in the last species, spreading like a fan, and fringed at the edge. Spur considerably longer than the germ. —Meadows.—July.—Perennial.

242. NEOTTIA.

NEOTTIA CERNUA. *Willd.* *Drooping Neottia. Ladies traces.*

Leaves lanceolate, three nerved; stem sheathed; flowers recurved-drooping; lip oblong, entire, acute. ***Willd.***

Syn. OPHRYS CERNUA. *L.*

This plant is distinguished, like several others of its genus, by the spiral arrangement of its flowers. Lower leaves very long, linear-lanceolate, nerved. Stem round, somewhat fleshy, invested with short, alternate, leafy sheaths; pubescent at top. Spike dense, oblong. Flowers curving downward, of a dull white colour. Germs ovate. Lip of the nectary entire, acute. —In moist ground.—August.—September.—Perennial.

NEOTTIA PUBESCENS. *Willd.* *Veined Neottia. Rattlesnake plantain.*

Radical leaves ovate, petioled, reticulated; scape sheathed, scape and flowers pubescent; lip ovate, acuminate; petals ovate. ***Willd.***

Syn. SATYRIUM REPENS. *Mich.*

A singular plant, remarkable for its dark leaves, reticulated on their upper surface with white veins. They proceed from the root or base of the scape on short petioles, are ovate, acute, entire, and generally endure the winter. Stem or scape erect, invested with a number of acute sheaths, distinctly pubescent. Spike oblong, downy. Flowers white, from all sides of the stem.—Woods.—July, August.—Perennial.

243. ARETHUSA.

ARETHUSA BULBOSA. *L.* *Bulbous Arethusa.*

Root globular; scape sheathed; spathe two leaved. *L.*

The root of this beautiful plant is a tuber or solid bulb, with the stem ascending from one side. In small plants the stem appears perfectly leafless, and only invested with a few alternate sheaths. In large plants the upper sheath expands into a short lanceolate leaf. The stem is erect, smooth, and bears a single flower, invested at base with a minute, two leaved spathe. Petals blue, all of them bent to one side, in the form of a hood. Lip of the nectary spreading, deflexed, somewhat crenate, bearded inside. Style large, broad, incurved like the petals, supporting the anther near its end.—Meadows.—May.—June.

ARETHUSA OPHIOGLOSSOIDES. *L.* *Adders' tongue Arethusa.*

Root fibrous; scape furnished with an oval leaf, and a lanceolate spathe-like leafet. *L.*

The root has no appearance of a bulb. Stem erect, with two remote leaves, one about midway of the stem, oval and sheathing at base; the other near the flower, ovate-lanceolate, much smaller. Flower pale blue, nodding, its petals spreading more than in the last species. Lip of the nectary spreading, fringed at the edge. Pistil bearing the anther near its end, and shorter than in the foregoing.—Meadows.—June.

244. CYMBIDIUM.

CYMBIDIUM PULCHELLUM. *Sw.* *Tuberous Cymbidium.*

Leaves radical, ensiform, nerved; scape few flowered; lip erect, narrowed at base, with an expanded border, and a concave hairy disc. *Sw.*

Syn. *LIMODORUM TUBEROSUM. L.*

This fine plant is found in meadows at Cambridge, and elsewhere, flowering in July. Root bulbous. Stem one or two feet high, sheathed at base. The plant has only one, long, grass like, sheathing leaf. The spike contains several alternate, purple flowers. Petals five, spreading. Lip of the nectary erect, increasing in width upward, and furnished toward the top with yellow, glandular hairs. Style opposite to this, concave, dilated, supporting a terminal anther.—Perennial.

DIANDRIA.

245. CYPRIPEDIUM.

CYPRIPEDIUM ACAULE. *Ait.* *Ladies' slipper.*

Scape leafless, one flowered; root leaves two, oblong, obtuse; lobe of the style round-rhomboidal, acuminate, deflexed; petals lanceolate; lip longer than the petals, cleft before. ***Willd. sub syn.***

Syn. *CYPRIPEDIUM HUMILE. Sw. Salisb. Willd.*

This singular genus are readily known by their large, inflated nectary. The present species differs from the rest in having no stem leaves. The leaves are two, springing from the root, large, oval-lanceolate, plaited, downy. Flower commonly single, terminal, nodding. Petals four, spreading, the two lateral ones narrower, and somewhat waved or twisted. Nectary a large, purple, inflated bag, veined, villous, and longer than the petals. Style over the base of the nectary, supporting two lateral anthers on the inside, and ending in a broad, roundish, deflexed, acute lobe, carinated on the inside.—Woods. —May, June.—Perennial.

Class XXI. MONŒCIA. *Staminiferous and pistiliferous, or barren and fertile flowers on the same plant.*

Order II. *DIANDRIA. Two stamens.*

246. LEMNA. Calyx one leafed; corolla none; style one; capsule many seeded.

Order III. *TRIANDRIA. Three stamens.*

247. ERIOCAULON. General calyx an imbricate head; corollas three petalled; seed one, crowned with the corolla.

248. CAREX. Spike imbricate; calyx glume one valved; corolla none; stigmas two or three; seeds covered with a swelling tunic.

249. SPARGANIUM. Ament roundish; calyx three leaved; corolla none; stigma cloven; drupe dry, one seeded.

250. TYPHA. Ament of barren flowers cylindrical, hairy; anthers about three on each filament. Ament of fertile flowers cylindrical; seed one, on a feathery pedicel.

251. COMPTONIA. Aments imbricated; in the barren flowers, calyx two leaved; corolla none; anther two parted. In the fertile flowers, calyx six leaved; corolla none; styles two; nut ovate.

Order IV. *TETRANDRIA. Four stamens.*

252. URTICA. Barren flowers, calyx four leaved; corolla none; nectary central, cup shaped. Fertile flowers, calyx two leaved; corolla none; seed one, superior, shining.

253. ALNUS. Barren flowers, ament composed of wedge shaped, three flowered receptacles; corolla four parted. Fertile flowers, scales of the ament two flowered; corolla none; styles two; seed compressed, ovate.

Order V. *PENTANDRIA.*

254. XANTHIUM. Barren flowers, calyx common, imbricate; florets funnel form, five cleft; receptacle chaffy. Fertile flowers, calyx two leaved, two flowered; corolla none; drupe dry, prickly, cloven; nucleus two celled.

255. AMBROSIA. Barren flowers, calyx common, one leafed; florets funnel form, three cleft; receptacle naked. Fertile flowers, calyx one leafed, one flowered; corolla none; nut toothed, one seeded.

256. AMARANTHUS. Barren flowers, calyx three leaved; corolla none; stamens three or five. Fertile flowers, calyx three leaved; corolla none; styles three; capsules one celled, opening transversely; seed one.

Order VIII. *POLYANDRIA. Eight or more stamens.*

257. SAGITTARIA. Calyx three leaved; co-

rolla three petalled. Barren flowers with about twenty four stamens. Fertile ones with numerous pistils; capsules many, swelling, one seeded.

258. MYRIOPHYLLUM. Calyx four leaved, corolla four petalled. Barren flowers with eight stamens. Fertile ones with four stigmas; seeds four, coated.

259. ARUM. Spathe one leafed; spadix cylindrical, naked at top, with stamens in the middle and germs at the base; berries one celled.

260. CALLA. Spathe ovate; spadix covered with flowers; corolla none; berry many seeded.

261. FAGUS. Barren flowers, calyx campanulate, five or six cleft; corolla none, stamens from eight to twelve. Fertile flowers, calyx from four to six toothed, hairy; corolla none; germs two; nuts two, contained in the coriaceous, four cleft, prickly calyx.

262. CASTANEA. Barren flowers, ament naked; calyx none; corolla five or six petalled; stamens from five to twenty. Fertile flowers, calyx five or six leaved, muricated; corolla none; germs three; styles six; stigma pencil form; nuts three, contained in the prickly calyx.

263. QUERCUS. Barren flowers, ament naked; calyx four or five cleft; corolla none; stamens from four to ten. Fertile flowers, calyx commonly six toothed; corolla none; styles from one to five; nut coriaceous, surrounded at base by the persistent calyx.

264. JUGLANS. Barren flowers, ament imbricate; calyx scale form; corolla six parted; filaments about eighteen. Fertile flowers, calyx four cleft, superior; corolla four parted; styles two; drupe coriaceous, with a grooved nut.

265. BETULA. Barren flowers, ament imbricate, scales peltate, three flowered; calyx a scale; corolla none; stamens from ten to twelve. Fertile flowers, ament imbricate; calyx scale two flowered; corolla none; seed one, winged.

266. CORYLUS. Barren flowers, calyx a scale of the ament, three cleft; corolla none; stamens eight. Fertile flowers, calyx two cleft, lacerated; styles two; nut ovate, smooth, surrounded with the persistent calyx.

267. OSTRYA. Barren flowers, ament imbricate; calyx a scale; corolla none; filaments branched. Fertile flowers, ament naked; calyx none; corolla none; capsules inflated, imbricated, one seeded at base.

268. PLATANUS. Aments globular. Barren flowers, corolla hardly visible; anthers growing round the filament. Fertile flowers, corolla many parted; stigma recurved; seeds roundish, with a capillary down at the base.

Order IX. *MONADELPHIA. Stamens united.*

269. PINUS. Barren flowers, calyx four leaved, corolla none; stamens many. Fertile flowers, ament a cone; calyx scale two flowered; corolla none; pistils two; nuts two, winged.

270. CUPRESSUS. Barren flowers, ament imbricate; calyx a scale; corolla none; anthers four, without filaments. Fertile flowers, ament a cone; calyx scale one flowered; corolla none; stigmas two; nut angular.

271. ACALYPHA. Barren flowers, calyx three or four leaved; corolla none; stamens about twelve. Fertile flowers, calyx three leaved; corolla none; capsules three grained, three celled; seeds solitary.

MONŒCIA.

DIANDRIA.

246. LEMNA.

LEMNA MINOR. *L.* *Duck meat.*

Leaves sessile, nearly flat on both sides; root solitary. *L.*

This minute plant, resembling a small floating scale, multiplies extensively in stagnant ponds and ditches, frequently giving a green appearance to their whole surface. The leaves, which constitute most of the plant, cohere two or three together, are small, ovate, entire, smooth, and slightly convex underneath. Root long, solitary, undivided, terminating in a small sheath. Flowers minute, proceeding from a marginal fissure.

TRIANDRIA.

247. ERIOCAULON.

ERIOCAULON PELLUCIDUM. *Mich.* *Transparent Pipewort.*

Glabrous; leaves subulate, channelled, pellucid, five nerved; stem solitary; head somewhat apple-shaped; involucre hardly distinct, with obtuse scales. *Mich. abr.*

Syn. *ERIOCAULON SEPTANGULARE? Sm.*

Found in ponds, growing under water, a part of the stem only projecting above the surface, and supporting a small, flat head of obscure flowers. The whole plant appears made up of a mass of cells, whose reticulated appearance is very obvious, particularly in the root. The leaves grow in a tuft at the bottom. They are one or two inches long, narrow, tapering to a

point, transparent at base, like the root. Stem erect, furnished with a sheath at base, simple, with six and sometimes seven angles, terminating in a small, hemispherical head of close flowers.—August.

248. CAREX.

CAREX SCOPARIA. *Willd.* *Broom Sedge grass.*

Spike androgynous, compound; spikelets about five, alternate, oval, obtuse, approximated, barren below; stigmas two; fruit ovate-lanceolate, margined, two pointed; bractes oblong, mucronated. *Willd.*

Pretty common in moist land. Leaves sheathing, rough on the edge. Culm triangular, the angles rough. Spikelets small, oval, sessile, containing barren and fertile flowers.—June.—Perennial.

CAREX STIPATA. *Muhl.* *Close spiked Sedge.*

Spike androgynous, compound; spikelets about five, oblong, barren above, aggregate; stigmas two; fruit spreading, ovate, acuminate, two pointed, flat and convex, nerved; culm triangular, very rough. *Willd.*

A larger species than the last. The culm ends in an irregular, interrupted spike of barren and fertile flowers, composed by five or six crowded spikelets. Fruit diverging, ovate, with a long point, flat on the inside, convex on the outside.—Meadows.—May.—Perennial.

CAREX VARIA. *Muhl.* *Variable Sedge.*

Barren spike solitary; fertile ones about three, somewhat approximated, sessile, roundish; stigmas three; fruit roundish-three cornered, beaked,

two toothed, pubescent, shorter than their oblong scale; culm erect. *Willd.*

Culm slender, triangular, rough at top, smooth below. Barren spike cylindrical. Fertile spikes very short. Capsules globular, with three prominent lines, and a short beak. Scales white at the edge.—May.—Perennial.

CAREX VESTITA. *Willd.* *Hairy beaked Sedge.*

Barren spike solitary, lanceolate; fertile ones two, ovate, sessile, approximated; stigmas three; fruit ovate, beaked, with its mouth oblique, pubescent, nearly equalling its ovate, acute scale. *Willd.*

Culm triangular, somewhat rough. Barren spike an inch or more in length. Fertile ones shorter, sessile, each furnished with a leafy bracte of considerable size at its base. Stigmas long, giving the outside of the spikes a hairy appearance.—June.—Perennial.

CAREX LUPULINA. *Muhl.* *Hop Sedge.*

Barren spike solitary; fertile ones three, on inclosed footstalks, oblong, approximated; bractes very long, leafy; stigmas three; fruit ovate, inflated, nerved, with a long, conical, two pointed beak, many times longer than their ovate, mucronate scale. *Willd.*

Very observable in meadows for its large, inflated spikes. Culm triangular, nearly smooth. Fertile spikes nearly sessile, supported at base by very broad, leafy bractes. Fruit crowded, swollen, terminating in a slender beak.—June, July.—Perennial.

CAREX FOLLICULATA. *L.* *Round spiked Sedge.*

Barren spike solitary; fertile one mostly soli-

tary, about six flowered, with a visible footstalk; stigmas three; fruit ovate, inflated, nerved, its beak with a two parted mouth; scale ovate, shorter than the fruit. ***Willd.***

This species resembles the last in its turgid, inflated capsules, but differs in the number and size of its spikes. Culm acutely triangular. Floral leaves very large and long. Fertile spike commonly single, shortly petioled, few flowered. Fruit very large, swelling, beaked, divergent.—June.—Perennial.

CAREX CRINITA. *Willd.* *Chaffy Sedge.*

Barren spikes two; fertile spikes four, distant, pedunculated, pendulous, cylindrical; stigmas two; fruit round-oval, swelling, with a short beak entire at the mouth, shorter than the oblong, awned scale. ***Willd.***

A tall, elegant grass, remarkable for its long, pendulous, bristly spikes. Culm triangular, three feet high. Leaves and bractes rough, very long. Fertile spikes cylindrical, nodding, or pendulous, acquiring a bristly appearance from the bearded awns of the scales.—Wet ground near Fresh Pond.—June.—Perennial.

249. SPARGANIUM.

SPARGANIUM RAMOSUM. *Sm.* *Burr reed.*

Leaves triangular at the base, their sides concave; common flower stalk branched; stigma linear. ***Sm.***

Readily distinguished from other Reeds and Flags, by the round burrs or heads of flowers on its branches. The radical leaves are three sided at base, erect, at length becoming sword shaped, with rather obtuse points. Stem leaves concave, and

sheathing. The stem is erect, round, and smooth, with several branches. Heads of flowers alternate, sessile; the lowermost fertile, the uppermost barren, smaller, and more numerous.—In ditches at Cambridgeport, and elsewhere.—July.—Perennial.

250. TYPHA.

TYPHA LATIFOLIA. *L.* *Water flag. Reed mace.*

Leaves somewhat ensiform; barren and fertile spikes approximated. *L.*

The Typha latifolia is an inhabitant of a great variety of climates and countries. It is common in deep waters, about the margin of rivers and ponds. Leaves erect, linear-sword shaped and very long. Stem five or six feet high, round, straight, and smooth. The fertile flowers form a large, very compact, cylindrical spike or ament, over and adjoining which is a spike of barren flowers. The leaves of this plant are much used in the manufacture of chairs.—July.—Perennial.

251. COMPTONIA.

COMPTONIA ASPLENIFOLIA. *Ait.* *Sweet fern.*

Syn. *LIQUIDAMBAR ASPLENIFOLIUM. L.*

This handsome shrub possesses a peculiar, and somewhat spicy scent. It is pretty common on hills and in dry woods, attaining to the height of about two or three feet. Leaves alternate, linear-lanceolate, the sides deeply indented or crenate, with alternate segments. The barren flowers grow in cylindrical aments. The fertile flowers produce small, smooth, ovate nuts, invested with the permanent corolla, at first sight resembling a burr.—May.

252. URTICA.

URTICA DIOICA. *L.* *Large stinging Nettle.*

Leaves opposite, heart-shaped; clusters much branched, in pairs, mostly dicœcious. *Sm.*

The sensible qualities of this plant are so convincing, that a botanical description would hardly be necessary to identify it, did not some others of the genus possess similar properties. Its power of stinging resides in its minute, tubular hairs or prickles, which transmit a poisonous fluid. It grows commonly in bunches about the road sides. Stem erect, obtusely quadrangular. Leaves opposite, heart-shaped, toothed. Racemes axillary, in pairs, spreading, branched. Flowers small, obscure, green.—July, August.—Perennial.

URTICA PUMILA. *L.* *Richweed.*

Leaves opposite, ovate, acuminate, three nerved, serrate; lower petioles as long as the leaf; flowers monœcious, triandrous, in corymbed heads, shorter than the petioles. *Willd.*

A weed about houses, distinguished by its stem, which is fleshy and almost transparent. Leaves smooth and shining, regularly toothed or serrate, very distinctly three nerved, with long petioles. Flowers in short axillary racemes or heads, repeatedly forked and recurved.—August, September.—Annual.

253. ALNUS.

ALNUS SERRULATA. *Willd.* *Common Alder.*

Leaves obovate, acuminate, the veins and their axils hairy underneath; stipules elliptical, obtuse. *Willd.*

Syn. *BETULA SERRULATA. Ait.*

The Alder grows in wet grounds, and forms large thickets in swamps and about the edges of streams and ponds. Considered as a tree it ranks with those of the smallest size. Its leaves are oval or inversely ovate, serrate, acute, or slightly acuminate, furnished underneath with prominent, parallel, hairy veins. Barren aments pendulous. Fertile ones short, rigid, forming a persistent cone.—March, April.

PENTANDRIA.

254. XANTHIUM.

XANTHIUM STRUMARIUM. *L.* *Sea Burdock.*

Stem unarmed; leaves heart-shaped, three nerved. *L.*

A very rough plant, growing at the edges of beaches, &c. near the salt water. Stem erect, spotted, bristly. Leaves hard and rough like a file, heart-shaped, serrate, on long petioles. The fruit is an oval burr, or nut of two cells, covered with stiff thorns, and ending in a pair of strong points, like horns.—August.

255. AMBROSIA.

AMBROSIA ELATIOR. *L.* *Tall Ambrosia. Roman Wormwood.*

Leaves twice pinnatifid, smoothish, petioles ciliated; racemes terminal, panicled; stem wand like. *Willd.*

A troublesome weed in cultivated grounds, hardly entitled to the character, which its name might imply. Stem erect, branching, from one to three feet high. Leaves bipinnatifid, the upper ones pinnatifid, with parallel segments gradually decreasing in length toward the point. Barren flowers nodding, small, in terminal racemes. Fertile flowers lower down,

sessile about the axils of the upper leaves.—August, September.—Annual.

256. AMARANTHUS.

AMARANTHUS HYBRIDUS. *L.* *Hybrid Amaranth.*

Racemes pentandrous, decompound, crowded, erect; leaves ovate-lanceolate. ***Willd.***

This is a common weed in waste and cultivated grounds. Stem erect, furrowed, somewhat hairy. Leaves alternate, on long petioles, green, ovate, mostly entire, mucronated, the lower ones retuse at the end. The flowers are crowded, small, and obscure, forming large, green clusters, axillary and terminal, which turn to a dull red as the plant grows old.—Annual.

POLYANDRIA.

257. SAGITTARIA.

SAGITTARIA SAGITTIFOLIA. *L.* *Arrow head.*

Leaves sagittate, acute. ***L.***

Common in meadows, by the sides of brooks and ditches, putting out its white flowers in July and August. The root is fleshy, and has been used as food in times of scarcity. The leaves are radical, large, smooth, and entire, very distinctly arrow shaped, with an acute point and lobes. Scape somewhat triangular, bearing whorls of three flowers each, on simple footstalks. Petals three, roundish, very thin and deciduous, and difficult to preserve. Stamens in the upper flowers; pistils in the lower. Fruit in globular heads.—Perennial.

258. MYRIOPHYLLUM.

MYRIOPHYLLUM SPICATUM. *L.* *Spiked water Millfoil.*

Leaves all pinnate, capillary; spike terminal, whorled, naked. ***Willd.***

This plant grows in deep ponds and rivers, where it is frequently drawn up by the lines of anglers. Stems long, slender, floating. Leaves in whorls of four together, finely divided or pectinate, always under water. The flowering spikes, which are the only part that emerges, are solitary, bearing their flowers in small whorls. Petals caducous, or sometimes wanting, according to the observation of different writers.—July, August.—Perennial.

259. ARUM.

ARUM TRIPHYLLUM. *L.* *Dragon root. Indian turnip.*

Stemless; leaves trifoliate; leafets oval, entire. ***Mich.***

A singular, and not inelegant plant, native of our swamps and wet woods. Scape round, smooth, sheathed at base by the leaf stalks. Leaves ternate, smooth, the leafets oval, acuminate, entire. The scape supports a large, ovate, acuminate spathe, forming a tube at bottom, but flattened and bent over at top like a hood, sometimes green, and sometimes elegantly striped within. Spadix club shaped, rounded at the end, green or purplish black, shorter than the spathe, abruptly contracted and surrounded by the germs at base. The root is globular and flattened, its upper half tunicated, its lower and larger half tuberous and fleshy, giving off its radicles in a circle from the edge. To the taste it is violently acrid and almost caustic. The acrimony however is lost by drying or boiling, and is not communicated to water or spirit. The remainder of the root is a mild, farinaceous substance, from which a sort of sago or arrow root has been prepared.—May.

260. CALLA.

CALLA VIRGINICA. *Mich.* *Virginian Calla.*

Leaves sagittate-hastate, with obtuse lobes; spathe elongated, incurved. *Mich.*

Syn. ARUM VIRGINICUM. L.

The leaves of this plant may be mistaken at sight for those of Sagittaria, from which they differ in their shorter and more obtuse lobes, and the different distribution of their nerves. They are radical, numerous, large, and smooth. Spathe erect, green, fleshy, cylindrical, acuminate, and waved at its edge. Spadix shorter than the spathe, tapering to a point, and covered with flowers.—Borders of ponds.—June, July.

261. FAGUS.

FAGUS FERRUGINEA. *Ait.* *Beech tree.*

Leaves ovate, acuminate, downy underneath, with large teeth, ciliate at the margin. *Willd.*

The Beech tree is known in winter by its smooth bark, its narrow, acute buds, and marcescent leaves. The leaves are ovate, fringed with fine hairs at the edge, furnished with parallel veins like those of the Chesnut, and with indentations of moderate depth at the edge. Calyx investing the fruit somewhat ovate, muricated, with soft, short prickles. Nut triangular.

The wood of the beech is not accounted very durable, when exposed to the vicissitudes of weather.

262. CASTANEA.

CASTANEA VESCA. *Willd.* *Chesnut tree.*

Leaves oblong-lanceolate, acuminate, mucronate-serrate, naked underneath. *Willd.*

A very large and majestic tree. The bark of the trunk is

coarsely divided by longitudinal fissures. Leaves half a foot long, lanceolate, smooth on both sides, with simple, prominent, parallel veins ending in large, pointed teeth at the margin, which are separated by obtuse indentations. Aments as long as the leaves, yellowish. The calyx investing the fruit forms a large, globular burr, with acute, compound, crowded spines. Nuts two or three, their upper part villous.

The American Chesnut tree is generally considered a variety of the European. Its wood is coarse grained, but light and durable. It is principally employed in fencing, for which use it furnishes one of the best materials.

263. QUERCUS.

Quercus alba. *L.* *White oak.*

Leaves somewhat equally pinnatifid, their segments oblong, obtuse, mostly entire; cup bowl-shaped, rough with tubercles; acorn ovate. ***Mich. abr.***

The white oak has long been recognized among us as one of the most valuable productions of our forests. Its name is derived from the whiteness of the bark, a character by which it may be distinguished at any season of the year. The leaves are divided at their sides into a number of oblong, rounded lobes, which are perfectly obtuse or entire, not terminating in points or bristles. They are acute at base, their under side pale or glaucous, and, when young, pubescent. The acorns are pretty large, ovate, contained in the enlarged calyx, which forms a cup of a hemispherical form, scaly and uneven on the outside.

The wood of the white oak is superior to any species in the northern states for strength and durability. Its timber is much used in ship building, in frames, in mills, in waggons, ploughs, &c. and for the staves and hoops of casks. The great consumption of it for these purposes, has rendered it comparative-

ly scarce, so that poorer species are often substituted, in the work shops of mechanics.

QUERCUS BICOLOR. *Willd.* *Swamp white oak.*

Leaves oblong-ovate, downy, white underneath, largely toothed, entire at base, the teeth unequal and dilated; fruit on long peduncles. *Mich. f. sub syn.*

Syn. *QUERCUS PRINUS TOMENTOSA. Mich.*
QUERCUS PRINUS DISCOLOR. Mich. f.

This species grows exclusively in swamps and low grounds. It is often brought to market as fuel, and is easily distinguished by its bark, which separates into large, flat scales or plates. The leaves are inversely ovate or wedge shaped, not sinuated, but bordered with a serpentine line, producing large, obtuse teeth. They are smooth above, but white and downy underneath. The acorns grow in pairs or single, on long stalks. They are large, oval, with a rather small, hemispherical cup.

The wood of the swamp oak is strong, heavy, and flexible, easy to split, and in point of durability approaches the white oak.

QUERCUS TINCTORIA. *Bartram.* *Black oak.*

Leaves slightly lobed, the lobes angular; cup somewhat saucer shaped, acorn depressed-globular. *Mich. sub v. angulosa.*

The black oak grows to a large size, and is uniformly characterized by the rough, and very dark coloured outer bark of its trunk. The leaves have their sides divided into a number of large, broad, but rather short lobes, furnished with a few mucronated teeth and angles. Their base is obtuse, and their under surface, while young, is slightly pubescent, or glandular. The cup of the fruit is thick, somewhat turbinated and not deep. Acorn short and round, with its summit depressed.

The bark of this oak furnishes the Quercitron used in dyeing. It is also one of the best species used in the tanning of leather. The wood is much inferior to that of the white oak, but is often used as a cheaper substitute.

QUERCUS COCCINEA. *Wang.* *Scarlet oak.*

Leaves on long petioles, oblong, deeply sinuate, glabrous, the lobes toothed, acute; cup very scaly; acorn short, ovate. ***Mich. f.***

A large species of oak. The leaves are divided into long, acute lobes, by very deep and large sinuses; the lobes ending in narrow teeth, which are mucronated with long, bristle shaped points. Both sides of the leaves are of a bright, shining green. The acorn is short and ovate, contained in a cup with prominent scales, and tapering at base. The wood of this species, as well as of the next, is more open and porous, also less durable, than that of the white oak.

QUERCUS RUBRA. *L.* *Red oak.*

Leaves on long petioles, glabrous, obtusely sinuate; cup saucer shaped, nearly smooth; acorn nearly ovate. ***Mich. f.***

The red oak is one of the largest of its genus. Its leaves are smooth and shining on both sides, divided into narrow lobes, which end in mucronated teeth, and are separated by wide and rounded sinuses. The acorns are very large, and contained in a remarkably flat, superficial cup, the scales of which are so compact as to produce a comparatively smooth surface.

The foregoing speecies constitute a considerable portion of the growth in the common woodlands of this vicinity. Their bark is the chief material used in tanning, and is occasionally applied in medicine to the purposes of an astringent and antiseptic. Next to walnut, their wood is esteemed the best fuel, and large quantities are consumed in town, brought from the south shore, the Middlesex canal, and the adjacent country.

QUERCUS ILICIFOLIA. *Willd.* *Shrub oak or Scrub oak.*

Leaves on long petioles, with five acute lobes, entire at the margin, ash coloured on the underside; cup somewhat top shaped; acorn roundish. *Mich. f. sub syn.*

Syn. *QUERCUS BANISTERI. Mich. et f.*

The leaves of the shrub oak are small, commonly divided into five, and sometimes three acute lobes terminated by a bristle. They are of a pale colour underneath, and downy on the same side when young. The acorns are small, short, dark coloured and striated.

The shrub oak grows on dry hills and barren plains, and is commonly considered an indication of a sterile soil. On account of its small size, it is rarely appropriated to any important use.

264. JUGLANS.

JUGLANS ALBA. *Willd.* *White walnut. Common hickory.*

Leafets seven, oblong-lanceolate, acuminate, serrate, pubescent and rough underneath, the odd one sessile; fruit somewhat four angled, smooth. *Willd.*

Syn. *JUGLANS TOMENTOSA. Mich. et f.*

The trunk of this walnut, in young trees, is covered with a smooth bark, in old trees the bark becomes cracked, rugged, and thick, but never scaly. The buds in winter are large, hard, and of a greyish white. The leaves are pinnate, with seven or nine large leafets, which are serrate and acuminate, nearly sessile, their under side and common stalk hairy. The barren flowers are in long, pendulous, downy aments, connected three together; the fertile ones at the ends of the young shoots. The nut is hard, thick shelled, commonly with four prominent an-

gles, the kernel tolerably good, the green shell rather thick, opening two thirds of its length in autumn, when the fruit is ripe.

JUGLANS GLABRA. *Muhl.* *Pig nut. Hog nut.*

Leafets seven, ovate, acuminate, serrate, glabrous on both sides, with resinous dots underneath, the odd one sessile; fruit and nut oblong or obcordate. ***Ex Willd. sub hac et obcordata.***

Syn. JUGLANS PORCINA. *Mich. f.*

This species of walnut has its young twigs in winter, according to the observation of Michaux, of a brown colour, and smaller by half than those of the white walnut and shagbark. The buds are also small. The leaves are pinnate, with seven, sometimes five, nearly sessile, serrate, acuminate leafets, smooth on both sides, not hairy. Aments in threes, long, and pedulous. Nut small, thick shelled, hard, smooth; the outer, green shell thin, frequently pear shaped or tapering at base, its quarters separating half way down when the fruit is ripe.

JUGLANS SQUAMOSA. *Mich f.* *Shellbark. Shagbark.*

Leafets five, on long petioles, ovate-acuminate, serrate, villous underneath, the odd one sessile; aments of barren flowers compound, glabrous, filiform; fruit globular, depressed; nut compressed. ***Mich. f. abr.***

Syn. JUGLANS COMPRESSA. *Gært. Willd.*

The bark of this tree separates into long, flat scales or plates, with loose, detached ends, giving its trunk a rugged appearance at a distance. Michaux observes that the buds are distinguished by the shortness of the two outer scales, which extend but half their length. The leaves are pinnate; leafets five or seven, large, oblong, acuminate, pubescent and soft un-

derneath. The fruit is large, roundish, depressed at top, the green shell exceedingly thick, and separating completely into quarters. The nut, which constitutes but a small part of the whole fruit, is white, angular, flattened, thin shelled, its kernel greatly superior to either of the preceding, and in considerable request.

The wood of the three foregoing species of walnut possesses similar properties. It is hard, compact, heavy, and of very great strength. At the same time it is liable to warp and decay, especially if exposed to the weather. It is principally used for purposes where strength is required, as in hoops, bows, the handles of tools, &c. It furnishes one of the best kinds of fuel known, and commands a higher price in our markets than any other species of wood.

JUGLANS CINEREA. *L.* *Butter nut. Oil nut.*

Leafets numerous, oblong-lanceolate, serrate, pubescent and soft underneath, petioles viscid, fruit oblong-ovate. ***Willd.***

Syn. *JUGLANS CATHARTICA. Cutler. Mich. f.*

This tree differs from the hickories already described, in its wood, flowers, and fruit. The leaves consist of about fifteen leafets, which are lanceolate, rounded at base, serrate, and somewhat pubescent. The aments are single, not united three together, as in the foregoing species. The fruit is large, oblong, somewhat pointed, with a viscid, adhesive surface. The nut is oblong, acuminated, very rough, with deep, irregular depressions, the kernel containing a great quantity of oil.

The wood is lighter and weaker than that of the preceding kinds, but is said to be durable. An extract made from the bark is in great estimation for its medicinal qualities, being one of the most useful laxatives. According to an experiment published in the Massachusetts Agricultural Journal, the sap of the butternut tree is capable of producing as much sugar as that of

the maple. Four of the trees yielded in one day nine quarts of sap, which produced one and a quarter pounds of sugar.

265. BETULA.

Betula populifolia, *Ait.* *Common white Birch.*

Leaves extensively acuminate, unequally serrate, glabrous. ***Mich. f.***

The name of white birch is indiscriminately applied to this species, and to Betula papyracea, a species common in the District of Maine, and which furnishes a considerable part of the eastern wood consumed in this town. The present species is common here in swamps, and multiplies very fast in moist lands that are not properly cleared. Like the paper birch, its trunk is covered with a white, smooth, outer bark, separable into thin layers, and very inflammable. Its young twigs are flexible, of a dark brown, spotted with white. The leaves are heart-shaped, tapering to a long point, glutinous, smooth on both sides. The flowers, both barren and fertile, are in long, pendulous aments. The wood is white, soft, and very perishable, decaying sooner than the bark.

Betula lenta. *L.* *Black Birch. Mahogany Birch.*

Leaves heart-ovate, acutely serrate, acuminate, glabrous. ***Mich. f.***

Syn. *Betula carpinifolia. Mich.*

This fine tree, sometimes also denominated Sweet birch, and Cherry birch, is well known for its fragrant and aromatic bark. Its young twigs are dark coloured, and spotted with white. Its leaves are smooth, ovate, heart-shaped at base, ending in a long point, with very acute, double serratures at the edge, and distinct, parallel veins underneath. The barren aments are pendulous, the fertile ones straight.

The wood of the black birch possesses many valuable qualities. It is compact, smooth, of a reddish colour, very strong,

and not liable to warp and crack. It is considerably used in cabinet work, particularly for bedsteads.

266. CORYLUS.

CORYLUS AMERICANA. *Walt.* *Common Hazel.*

Calyx of the fruit rounded and bell shaped, larger than the nut, its border dilated, tooth-serrate; leaves roundish, heart-shaped, acuminate. *Willd.*

The common hazel nut is a slender shrub, usually growing in bunches about the borders of fields. The barren flowers grow in long, pendulous aments; the fertile ones in a sort of buds, on a different part of the branch. The nuts, which are nearly equal in quality to the European, grow in large bunches, each one invested with a large, hairy calyx extending considerably beyond the nut.—April.

267. OSTRYA.

OSTRYA VIRGINICA. *Hop Hornbeam. Iron wood.*

Cones oblong-ovate; leaves oblong-ovate, acuminate; buds acute.

This tree is generally of small size, and remarkable for the fine division of the outer bark of its trunk. The leaves are alternate, ovate, a little hearted at base, finely and acutely serrate, acuminate. Barren flowers in pendulous aments. Fertile ones enlarging into a sort of oblong cone, in its structure resembling the common hop. This fruit is composed of vesicles, or inflated capsules, lying over each other, and containing each a seed at its base.

The wood is hard, close grained, and heavy. In some parts of the country it has acquired the name of *Lever wood*, from the use to which it is applied.

268. PLATANUS.

PLATANUS OCCIDENTALIS. *L.* *Plane tree. Button wood. Sycamore.*

Leaves lobed-angular; branches whitish. *Mich.*

This tree, commonly known by the name of Button wood, attains to an extraordinary size. Trees are said to be found in the western states, whose trunks measure from forty to fifty feet in circumference. With us it is one of the largest native trees. The leaves are broad and lobed, with many acute segments. When young they are downy at the veins underneath. On breaking off the petiole, the next year's bud is found concealed within its base. The flowers grow in balls or globular aments, and are succeeded by long seeds, furnished with a fine reddish down at base. The receptacle of the seeds, constituting the nucleus of the ball, is hard and woody, and closely enveloped by a regular net work, which may be easily detached. The balls are retained all winter on the trees by their tough, fibrous stalks. Each year the outer bark of the branches scales off to a determinate extent, leaving a white surface beneath it. This circumstance distinguishes the tree at sight from all others around it.

The wood is fine grained, and is susceptible of a good polish. It is however said to be liable to warp, and by no means durable when exposed to the weather.

MONADELPHIA.

269. PINUS.

PINUS RIGIDA. *L.* *Pitch Pine.*

Leaves in threes; cones ovate, clustered; spines of the scales reflexed; sheaths of the leaves short. *Lamb.*

The Pitch Pine is a very common inhabitant of barren, sandy

tracts of land. Its bark is very thick, and rough with deep, irregular clefts. The leaves are of moderate length, needle shaped, and united three together in a common sheath. The cones are ovate or pyramidal, the scales rigid, each one armed with a short, acute, reflexed spine.

The wood abounds in turpentine, and contains a large portion of alburnum or sap. It is occasionally employed in building, but is chiefly used as a light fuel, under the form of "split pine."

PINUS STROBUS. *L.* *White Pine.*

Leaves in fives; cones cylindrical, longer than the leaves, loose. ***Ait.***

This noble and very useful tree rises with a straight trunk to an uncommon height. Its bark is comparatively smooth, and in young trees it is without fissures. The branches are given off in whorls or circles. The leaves are much finer and more delicate than in the last species. They grow in fascicles of five together, with hardly any sheaths. The cones are very long, cylindrical, curved, and pendulous; composed of large, smooth, loose scales.

The trunk possesses very little resin, and its portion of sap wood is comparatively small. The texture of the wood is fine and soft. No tree is more extensively employed in building, or for the ordinary purposes of carpenters' and joiners' work. The large trees are particularly in request for the masts of ships, and vast quantities of the wood have been annually exported from the eastern coast in the form of timber and boards.

PINUS NIGRA. *Ait.* *Black or double Spruce.*

Leaves solitary, four cornered, erect, straight; cones ovate, scales elliptical, waved at the edge, erect. ***Lamb.***

Syn. *ABIES NIGRA. Mich.*

The branches of the double Spruce are thickly covered on all sides with short, dark coloured, linear leaves, inserted laterally and singly. The cones are small, oval, pendulous, composed of thin scales, which are waved and crenate, or partially cleft on the edge.

This tree is not very common, unless cultivated, in the environs of Boston. At the eastward it is frequent. Its wood is light, strong, and elastic, and much used for the smaller spars of vessels.

PINUS CANADENSIS. *L.* *Hemlock Spruce.*

Leaves solitary, flat, denticulate, nearly in two rows; cones ovate, terminal, hardly longer than the leaves. ***Lamb.***

Syn. *ABIES CANADENSIS. Mich.*

The Hemlock occurs pretty frequently in woods in the vicinity of Boston. It is a straight tree, remarkable for the horizontal arrangement of its branches and leaves. The leaves are in two rows, close, linear-oblong, obtuse, nearly flat beneath, a little convex above. When examined with a glass, they are found edged with minute teeth. Cones ovate-oblong, very small.

The wood of the Hemlock is occasionally substituted for Pine, to which it is inferior, in building. The bark possesses the tanning principle in great perfection, and is used in the preparation of leather, as a substitute for, or in combination with the bark of the oaks.

PINUS MICROCARPA. *Lamb.* *Red Larch. Hacmatack.*

Leaves fascicled, deciduous; cones roundish, few flowered, with inflected scales; bractes elliptic, obtusely acuminate. ***Lamb.***

Syn. *LARIX AMERICANA. Mich.*

The Larch is a fine tree, differing remarkably from the Pines, already mentioned, in its leaves, which fall at the approach of winter. They grow in tufts or fascicles, on the sides of the branches, which are mostly horizontal. The tree flowers with small aments, the barren ones containing two anthers under each scale, and the fertile ones two germs. These last are succeeded by small cones, with soft scales, inflected at the edge. Seeds small, winged. This tree attains the height of eighty or ninety feet. Its wood is strong and durable, and is used in ship building. It frequents a low, moist soil.

270. CUPRESSUS.

CUPRESSUS THUYOIDES. *L.* *White Cedar.*

Branchlets compressed; leaves in four rows, imbricated, ovate, tuberculated at base. ***Willd.***

The White Cedar grows naturally in wet situations, sometimes occupying considerable tracts of marshy land, known by the name of *Cedar swamps*. The small branches are finely subdivided, their last divisions compressed, and covered by four rows of short, minute leaves, the two lateral rows longest. Each leaf is furnished with a minute tubercle or gland on the back, near its base. Cones extremely small, angular, and somewhat spherical.

The wood is light, soft, and very durable. It is used for shingles, for wooden vessels, also for fencing and other purposes where durability is required. This tree and the last are found occasionally, but not frequently, in the neighbourhood of Boston.

271. ACALYPHA.

ACALYPHA VIRGINICA. *L.* *Three seeded Mercury.*

Pubescent, leaves on short petioles, lance-oblong, serrate; involucres subsessile, axillary, nerved, cut into acute, crested segments. ***Mich. abr.***

An annual plant of ordinary appearance. Branches pubescent. Leaves ovate-lanceolate, with a rather obtuse point, remotely serrate or crenate at the edge, somewhat three nerved. Involucres of the fruit axillary, hairy, on short stalks, their edge cut into a number of long, acute, ciliated segments or teeth.—Woods, Cambridge.—August.

Class XXII. DIŒCIA. *Barren and fertile flowers on different plants.*

Order II. *DIANDRIA. Two stamens.*

272. SALIX. Calyx scale of an ament; corolla none. In the barren flowers, from one to five stamens, with a nectariferous gland at the base. In the fertile flowers, two stigmas; capsule one celled, two valved; seeds downy.

Order IV. *TETRANDRIA. Four stamens.*

273. MYRICA. Calyx a concave scale of the ament; corolla none; styles two; berry one seeded.

Order VI. *HEXANDRIA. Six stamens.*

274. SMILAX. Calyx six leaved; corolla none; styles three; berry three celled; seeds two.

Order XII. *POLYANDRIA. Many stamens.*

275. POPULUS. Calyx a lacerated scale of the ament; corolla turbinate, oblique, entire. In the fertile flowers, stigma four cleft; capsules two celled, many seeded.

Order XIII. *MONADELPHIA. Stamens united.*

276. JUNIPERUS. Barren flowers, calyx the scales of an ament; corolla none; stamens three. Fertile flowers, calyx scales of an ament, fewer, three parted, becoming fleshy, united into a three seeded berry.

DIŒCIA.

DIANDRIA.

272. SALIX.

SALIX ERIOCEPHALA. *Mich.* *Swamp Willow.*

Diandrous; twigs downy; leaves oblong-oval, somewhat retuse at base, serrulate; aments oval, exceedingly villous. *Mich.*

A small tree, common in low, moist grounds, where its woolly aments expand during the month of March, and are usually in flower the first week in April. The scales of both the barren and fertile aments are covered with very long, even, smooth, silken hairs, which at a distance give them a woolly appearance. In the barren aments each scale produces two long, yellow anthers; in the fertile ones, which exceed the last in length, they support an oblong, tapering, downy germ. Leaves oval-oblong, nearly entire, green above, glaucous and somewhat downy beneath.

TETRANDRIA.

273. MYRICA.

MYRICA GALE. *L.* *Sweet Gale. Dutch Myrtle.*

Leaves wedge-lanceolate, slightly serrate above; barren aments imbricate, the scales ciliate; fruit in scaly heads. *Mich.*

A branching shrub, about four or five feet in height. Leaves alternate, lanceolate-wedge shaped, (their termination much more obtuse than in the European variety,) serrated and nearly smooth. Aments alternate, from the axils of the last year's

leaves, short, oblong-ovate. The fruit has a strong, penetrating, spicy scent.—About the edges of Fresh Pond.—April.

MYRICA CERIFERA. *L.* *Bayberry. Wax Myrtle.*

Leaves wedge-lanceolate, slightly serrate above; barren aments loose; fruit spherical, naked, distinct. *Mich.*

The Bayberry grows in every kind of soil, and varies considerably in size. The shrubs which grow in the moist woods at Cambridgeport, are usually six or seven feet in height. Leaves oblong-oval, entire, or furnished with a few remote teeth. Flowers in short aments on the sides of the last year's shoots. They have a peculiar, somewhat spicy taste. In autumn the fertile twigs are surrounded with bunches of small, crowded, greyish berries, which remain after the leaves have fallen. The surface of these berries is covered with wax, which is obtained by boiling them in water, until the wax separates and floats upon the surface. In the interior where these shrubs are frequent, the wax is collected in considerable quantities, and used for candles, an ingredient in ointments, and other purposes.

HEXANDRIA.

274. SMILAX.

SMILAX ROTUNDIFOLIA. *L.* *Green Briar.*

Stem prickly, round; leaves unarmed, heart-shaped, pointed, five or seven nerved.

A hardy and very troublesome vine, climbing upon trees and bushes, and forming, with its thorny branches, almost impassable thickets. Stem smooth, woody, strong, armed with short, straight, rigid thorns, proceeding from the wood. Leaves large, smooth, roundish-heart shaped, ending in a short point, commonly five nerved. Tendrils very strong, from the top of

the stipules. Umbels of flowers small, on short, axillary stalks. Berries small.—Moist woods.—June.

SMILAX PEDUNCULARIS. *Muhl.* *Long stalked Smilax.*

Stem round, unarmed; leaves roundish-ovate, acuminate, nine nerved, peduncle of the fertile umbel longer than the leaves.

A rank, herbaceous, climbing plant. Stem round, smooth, attaching itself to other plants by its stipular tendrils. Leaves of the stem large, heart-shaped, with a short point, petioled, smooth, with about nine nerves. Flowers small, greenish, with an offensive odour, in simple umbels, on very long, axillary peduncles. The fertile ones are succeeded by large bunches of rounded, compressed, crowded, bluish berries. The axils of many of the leaves give rise to short, barren branches, supporting half a dozen ovate, five nerved leafets.—June.—Perennial.

POLYANDRIA.

275. POPULUS.

POPULUS TREMULOIDES. *Mich.* *American Aspen.*

Leaves roundish, abruptly acuminate, serrulate, pubescent at the edge. *Mich. f.*

The small, tremulous leaves of this Poplar have great affinity to those of the European Aspen, whose quivering foliage has long been proverbial. The tree hardly attains to the middle size. The flowers appear in April, long before the leaves, in pendulous, silken aments. The leaves are small, compared with other species, light, roundish, scarcely hearted at base. The bark is smooth, and the wood light, fine, soft, and perishable.

POPULUS GRANDIDENTATA. *Mich.* *Large Aspen or Poplar.*

Petioles compressed; leaves round-oval, smooth

both sides, unequally sinuate, with large teeth, the younger ones villous. ***Mich. f.***

Syn. POPULUS TREPIDA. *Muhl.*

This tree is occasionally met with in our woods, but is much less common than the preceding species. It is easily distinguished from the various cultivated poplars by the large, unequal indentations on the margin of the leaves. The leaves, as Michaux observes, are covered when young with a white down, which disappears as they grow older. In many instances they are furnished with a pair of glands at base. The aments, which are two or three inches long, appear in May. Wood much like the last.—Cambridge, Milton.

MONADELPHIA.

276. JUNIPERUS.

JUNIPERUS VIRGINIANA. ***Red Cedar.***

Leaves ternate, adnate at base; the younger ones imbricate, the older ones spreading.

The Red Cedar is a common tenant of rocky and barren hills, in a dry and gravelly soil. Its foliage is hard, firm, and evergreen. The leaves vary in length, but are mostly short, resembling small, acute scales, closely sessile at base, and lying over each other. They surround the stem in threes, the younger ones frequently opposite. The scales of the ament give rise to a small roundish berry, covered when ripe with a blue powder. The wood of the Red Cedar is light and very durable. It constitutes an excellent material for posts, to which use it is commonly appropriated with us. The leaves resemble Savin in their medicinal properties, and are particularly used as a topical stimulant.

Class XXIII. POLYGAMIA. *Perfect flowers together with barren, or fertile, or both, on the same or distinct plants.*

Order I. *MONŒCIA. Barren, fertile, and perfect flowers, found on one plant.*

277. ANDROPOGON. In the perfect flowers calyx, glume one flowered; corolla, glume awned at the base; stamens three; styles three; seed one. In the barren flowers, calyx awnless; stamens three.

278. HOLCUS. Perfect flowers, calyx glume one or two flowered; corolla, glume awned; stamens three; styles two; seed one. Barren flowers, calyx two valved; corolla none; stamens three.

279. ATRIPLEX. Perfect flowers, calyx five parted; corolla none; stamens five; style two parted; seed one depressed. Fertile flowers, calyx two leaved; corolla none; style two parted; seed one compressed.

280. VERATRUM. Calyx none; corolla six parted; stamens six. Perfect flowers, pistils three; capsules three; many seeded. Barren flowers containing the rudiment of a pistil.

281. ACER. Calyx five cleft; corolla five petalled; stamens eight; capsules two or three, one seeded, terminated by a wing. Barren flowers without germ or style.

282. NYSSA. Perfect flowers, calyx five parted; corolla none; stamens five; pistil one; drupe inferior. Barren flowers, stamens ten.

283. FRAXINUS. Perfect flowers, calyx none or four parted; corolla none or four petalled; stamens two; pistils one; capsule flattened; seeds mostly solitary, pendulous. Fertile flowers, pistil one, lanceolate.

POLYGAMIA.

MONŒCIA.

277. ANDROPOGON.

ANDROPOGON NUTANS. *L.* *Beard grass.*

Panicle nodding, awns twisted, polished; glumes of the calyx rough-haired.

Syn. *ANDROPOGON AVENACEUS. Mich.*

A tall, handsome grass. Culm and sheaths smooth. Leaves rough. Panicle very long and slender, somewhat nodding. Peduncles smooth, some of the partial ones a little hairy. Valves of the calyx hairy; those of the corolla mostly smooth, and of a bright chesnut colour. The fertile flowers have a long, bright awn, twisted in its lower half, and bent at an angle about its middle.—Borders of woods.—September.—Perennial.

278. HOLCUS.

HOLCUS ODORATUS. *L.* *Seneca grass.*

Glumes three flowered, awnless, pointed; the perfect flower with two stamens.

An erect, early grass, with a small panicle of short flowers. Stem, sheaths and leaves glabrous; the leaves of the stem very short. Panicle erect, with a few horizontal or divaricated branches. Calyx of two smooth, thin, transparent, swelling valves, rounded at the base, and acute at the point. Florets three in each calyx, the two lateral ones barren, their outer valve ciliate; the middle one fertile, and furnished with only two stamens. Styles two.—Meadows, Cambridge, Brighton.—May.—Perennial.

Among our indigenous grasses this is one, which appears

particularly entitled to the attention of agriculturalists. It is a thriving, and early grass, being usually in flower by the middle of May. It is sweet and tender, and in drying exhales a fragrant odour, not inferior to that of the sweet scented Vernal grass. Its native place of growth is in wet, boggy meadows, where it might be usefully substituted for the coarse and ordinary grasses usually obtained from those soils.

279. ATRIPLEX.

ATRIPLEX PATULA. *L.* *Spreading Orache.*

Stem herbaceous, spreading; leaves deltoid-lanceolate, somewhat hastate; calyx of the seed somewhat muricate on the disc. *Sm.*

Stem spreading, very much branched. Leaves powdery underneath, the lower ones mostly hastate, the upper ones lanceolate. Racemes axillary and terminal. The seed is enclosed between two large, triangular valves, furnished on their back with an irregular number of short, conical points.—Salt marshes.—August.—Annual.

280. VERATRUM.

VERATRUM VIRIDE. *Ait.* *Poke root.* *Swamp Hellebore.*

Racemes panicled; bractes of the branches oblong-lanceolate; peduncles pubescent, shorter than the partial bractes.

A large, green, leafy plant, not unfrequent in meadows and swamps. Stem erect, straight, often three or four feet high. Leaves numerous, large, oval or lanceolate, acuminate, entire, plaited and finely nerved, sheathing the stem with their base. Flowers in a large panicle, with pubescent branches, each branch and flower stalk supported by a narrow bracte. Corolla of six greenish, oblong, acute petals, thickened on each side at the base. Capsules three.—June.—Perennial.

The root of this plant, when taken internally, produces violent effects, and is dangerous in considerable quantities. It is chiefly used in the country as an external application in cutaneous affections. From its great affinity in habit to the Veratrum album, an European species, which has lately acquired considerable celebrity as a remedy in gout; the American plant is particularly entitled to the attention of phsiycians.

281. ACER.

ACER RUBRUM. *L.* *Swamp Maple. Red Maple.*

Leaves palmate-five lobed, unequally toothed, pubescent, and at length glaucous underneath, the sinuses acute; fertile flowers aggregate, with rather long stalks. ***Mich.***

This maple grows plentifully in our swamps and low woods. The flowers, which appear early in May, are small, numerous, of a deep red, and collected in little fascicles or sessile umbels. The fertile ones are succeeded by a red fruit, known by the name of maple keys, consisting of a pair of small capsules, each terminated by a long, membranous appendage, resembling the wing of an insect. The leaves are opposite, rounded, or hearted at base, and divided into three or five principal lobes, separated by a large, acute notch. They are irregularly toothed, and glaucous underneath.

The wood of this species is close grained, smooth, and hard. It is much used in the manufacture of tables, chairs, and other kinds of furniture. A variety denominated Curled Maple, occasioned by the serpentine course of the fibres in some old trees, has a beautiful, shaded appearance in cabinet work, and is also used for gun stocks, on account of its solidity and toughness.

ACER SACCHARIUM. *L.* *Rock Maple. Sugar Maple.*

Leaves five parted-palmate, glabrous, entire at

the margin, glaucous underneath; flowers pedunculated, pendent. *Mich. f.*

The Rock Maple, though common in the interior, is rarely met with in the vicinity of Boston. Some young trees occur in the woods at Roxbury. The flowers of this species are yellowish, small, and supported by slender, drooping footstalks. The fruit is larger than in the Red Maple, and of a light greenish colour. The leaves have three or five principal lobes, separated by a sinus or notch, which is rounded, not angular, at bottom. They are pale, and sometimes downy on the under side.

The wood is hard, compact, and smooth. It is much used in cabinet work, particularly a beautiful variety denominated Bird's eye Maple, and a curled variety like that in the last species. It makes good fuel, though inferior to walnut and oak; and, with the Betula papyracea, it constitutes a greater portion of our eastern wood.

But the peculiar value of this tree consists in the sugar, which is obtained from its sap. A tree of the ordinary size will yield from twenty to thirty gallons of sap in a season. This sap is collected by boring holes in the trees, and affixing to them small troughs, which convey it into reservoirs prepared for its reception. It is then put into large kettles and boiled down, until it is sufficiently inspissated to chrystallize or grain. It thus forms the raw sugar, which may be purified in the usual way.

282. NYSSA.

NYSSA VILLOSA. *Mich.* *Tupelo tree.* *Swamp Hornbeam.*

Leaves oval, entire, the petiole, middle nerve, and margin villous; fertile stalks about three flowered; nut short-obovate, obtusely striate. *Mich.*

This tree grows in swamps, and is frequently of a pyramidal form, with horizontal branches. The leaves are oval, entire, acute, tough and firm, paler on the under side, slightly pubes-

cent on the margin and petiole, two or three inches in length. The flowers are small, obscure, of a green colour, collected on the end of a long peduncle. Each fertile peduncle produces two or three small, oblong drupes, of a deep blue colour, each containing an exceedingly hard, striated stone.

The wood of this tree is white, and moderately hard. Its fibres are closely interwoven, so as to render it extremely tough and difficult to split. In Massachusetts it is generally called *Hornbeam*, a name properly belonging to the genus Carpinus.

283. FRAXINUS.

FRAXINUS AMERICANA. *Mich. f.* *White Ash.*

Leafets elliptic, acuminate, slightly toothed, petioled, glaucous underneath.

Syn. *FRAXINUS DISCOLOR. Muhl.*

This very valuable tree grows to the height of seventy or eighty feet. Its branches are opposite, and covered with bark of a very light colour. Leaves pinnate, consisting of about seven oval, acuminated leafets, whitish underneath, more or less toothed on their margin. The flowers grow in loose, compound racemes, and are succeeded by winged capsules. These are cylindrical at base, but dilated at their end into a long, flat appendage, somewhat lanceolate in form, but blunt or emarginate at the end. The wood of the common Ash is exceedingly durable, firm, and elastic, with a tolerable degree of lightness. It is the principal material used in the manufacture of carriage frames, of light agricultural implements, of oars, blocks, boxes, &c.—May.

Class XXIV. CRYPTOGAMIA. *Fructification anomalous or concealed.*

Order I. *FILICES. Ferns.*

284. POLYPODIUM. Fructification in roundish, scattered dots, not marginal; involucre none.

285. ASPIDIUM. Fructification in roundish, scattered dots; involucre umbilicate, opening nearly all round.

286. DICKSONIA. Fructification in roundish, distinct, marginal dots; involucre double, one superficial, opening outward; the other from the inflexed margin of the frond, opening inward.

287. ASPLENIUM. Fructification in scattered, straight lines; involucre lateral, opening inward.

288. ADIANTUM. Fructification in distant dots or lines upon the margin of the frond; involucres membranaceous, from the inflexed margin of the frond, opening inward.

289. PTERIS. Fructification in a continued, marginal line; involucre from the inflexed margin of the frond, opening inward.

290. ONOCLEA. Fructification crowded, occupying the whole back of a separate frond; involucres from the margin of the frond, opening inward.

291. OSMUNDA. Fructification crowded, somewhat globular, pedicelled, disposed on the back of the frond, or in separate racemes.

292. Lycopodium. Capsules sessile, solitary, axillary, reniform, two valved, opening elastically.

293. Equisetum. Ament composed of peltate scales, flowering on the inside; seeds numerous, enfolded by four pollen-bearing filaments.

CRYPTOGAMIA.

FILICES.

284. POLYPODIUM.

POLYPODIUM VULGARE. *L.* *Common Polypody.*

Frond pinnatifid; segments linear-oblong, obtuse, slightly serrate.

A handsome fern, not uncommon on the sides of rocks and steep shady hills, forming beds by means of its creeping roots. The stalk or stipe is perfectly smooth, grooved on the upper side. Fronds about half a foot long, divided in a pinnate manner almost to the stalk or midrib, by sinuses which are more acute than in the European variety. Segments of the frond oblong, parallel, rounded at the end, very slightly serrate, furnished on the back with a double row of large, round, yellowish, granular, naked dots of fructification.—Perennial.

285. ASPIDIUM.

ASPIDIUM ACROSTICHOIDES. *Muhl.* *Terminal Shield fern.*

Stipe chaffy; frond long, pinnate, its divisions alternate, subsessile, auriculated on one side at base, slightly serrate, ciliate; only the upper ones fruitful. ***Mich. sub syn.***

Syn. *NEPHRODIUM ACROSTICHOIDES. Mich.*

Remarkable for the difference between its lower and upper leaves. The stipe is covered with loose, membranous, chaffy scales. The leaves or pinnæ are numerous, oblong, somewhat acute, edged with small, mucronate serratures, furnished with an angular lobe on their upper side at base. The lower leaves

are without fruit; the upper ones much smaller, covered with dots of fructification, which unite, so as to overrun the whole under surface.—Rocks and hills.—Roxbury.—Perennial.

ASPIDIUM THELYPTERIS. *Sm.* *Meadow Shield fern.*

Frond pinnate, its divisions pinnatifid, subcrenate, distinct at base, decussating; dots of fructification confluent. *Sm.*

Common in low, moist grounds, about the edges of meadows and swamps. Stipe glabrous. Divisions of the frond long and slender, the lower pairs frequently decussating, or crossing each other; a circumstance which Dr. Smith has noticed in his specific character. They are pinnatifid, or deeply cut into oblong, roundish segments, which are slightly crenate at the edge, and revolute when in fruit. The first segments of each division are at a little distance from the stipe, and seem to form a parallel line on each side of it, running through the whole length of the frond, a character well represented in the figure of Plukenet. The fruit commences in small dots, and finally overruns the whole under surface of the frond.—Perennial.

ASPIDIUM MARGINALE. *Sw.* *Marginal Shield fern.*

Frond pinnate, its divisions subpinnate, glabrous, with oblong, entire lobes, sinuate-repand at the base; dots marginal.

Syn. *POLYPODIUM MARGINALE. L.*
NEPHRODIUM MARGINALE. Mich.

A larger fern than either of the preceding. Stipe chaffy. Divisions of the frond nearly pinnate. Subdivisions or segments distinct, oblong, obtuse, crenate, contracted at base, afterward decurrent, so that their common stalk becomes slightly winged, or the division pinnatifid. Dots of fructification distinct, round, close to the margin. Their umbilicated involucre is very obvious.—Woods.—Roxbury.—Perennial.

ASPIDIUM ASPLENIOIDES. *Muhl.* *Dark Shield fern.*

Stipe glabrous; frond twice pinnate; segments oblong, cut-toothed; dots reniform, arranged near the nerve.

This is a large, smooth, brittle fern. Divisions of the frond pinnate; the segments oblong, acute, with distinct teeth, separated by deep indentations. The teeth are again denticulate, and the lower ones somewhat obtuse. Fructification with reniform or lunulate involucres, at first resembling lines, as in Asplenium, afterwards extending over the whole under surface of the frond, giving it a brownish appearance.—Moist woods.

286. DICKSONIA.

DICKSONIA PILOSIUSCULA. *Willd.* *Small fruited Dicksonia.*

Frond twice pinnate; divisions pinnatifid; segments toothed; stipe somewhat hairy.

Syn. *NEPHRODIUM PUNCTILOBULUM. Mich.*

A pretty large, thin, and very delicate fern. The common stalk is smooth, with the exception of a few fine, short hairs, which also invest its divisions. The divisions of the frond are pinnate or pinnatifid, the segments decurrent, oval-oblong, deeply cut or pinnatifid, the partial segments again toothed upon their edge. Dots of fructification minute, near the margin. —Road sides and pastures.—Perennial.

287. ASPLENIUM.

ASPLENIUM MELANOCAULON. *Muhl.* *Dwarf Spleenwort.*

Frond pinnate; divisions roundish, crenate, wedge shaped at base.

Syn. *ASPLENIUM TRICHOMANES. Mich.*

An extremely small and delicate fern. Frond pinnate.

Stipe smooth, of a shining black colour. Divisions or leafets sessile, nearly round, crenate upon their outer edge, entire and acute at base. Fructification in about five or six linear, diverging dots, which become roundish when old.—Found among high, shady rocks in Roxbury.—Perennial.

ASPLENIUM EBENEUM. *Ait.* *Ebony Spleenwort.*

Frond pinnate; divisions lanceolate, somewhat falcate, serrate, auricled at base; stem quite smooth.

Syn. *ASPLENIUM TRICHOMANOIDES. Mich.*

Considerably larger than the last. Stipe slender, of a smooth, polished, jet black. Divisions or leafets sessile, oblong, tapering to a point, sometimes a little curved, somewhat serrate, furnished with an acute lobe on each side at base, which gives them a sort of hastate form. Fructification in short, diverging lines, arranged in a double row on the back of the divisions.—Dry woods and hills.—Perennial.

ASPLENIUM THELYPTEROIDES. *Mich.* *Silvery Spleenwort.*

Frond pinnate; divisions pinnatifid; segments oval, round-obtuse, slightly denticulate; fructification in short, equal, oblique, parallel lines. ***Mich. abr.***

This most beautiful fern grows to a pretty large size. Stipe smooth, pale. The divisions of the frond are long and pinnatifid. Segments oblong, close, even, parallel, rounded at the end and nearly entire. Fructification in two rows of short, oblique, close, parallel lines, the opposite pairs forming nearly a right angle. The involucres, when young, have a bright, silvery appearance.—Found by a brook in Roxbury.—Perennial.

288. ADIANTUM.

ADIANTUM PEDATUM. *L.* *Maidenhair. Mowhair.*

Frond pedate; divisions pinnate; segments rhomboid-oblong, somewhat lunate, cut-lobed.

Few vegetables possess a greater delicacy of structure than is exhibited by the glossy stems, and fine, regular leaves of the Maidenhair. The stipe, which is of a shining, jet black, divides by a large fork into two principal branches, each of which gives off several successive branches from its upper side; so that the whole frond has the appearance of a pedate leaf without its middle division. The segments or leafets are alternate, oblong, entire on the lower edge, cut and toothed on the upper. The fruit grows in semicircular points at the margin of the leaf, covered by the folding back of its edge.—Found in moist, rocky woods.—Perennial.

289. PTERIS.

PTERIS AQUILINA. *L.* *Common Brake.*

Frond more than decompound; divisions pinnate; segments oblong-lanceolate, the lower ones pinnatifid, upper ones entire and smaller.

Very common in woods, and about the borders of fields and pastures. Stipe erect, smooth, dividing by large, opposite branches, which are again subdivided. Segments or leafets sessile, oblong, tapering to an obtuse point, the lower ones largest, their edge divided into large, obtuse teeth, by a sort of serpentine line; upper ones entire, obtuse. The fructification grows in a continued, narrow line at the edges of the frond, and is covered by its reflexed margin.—Perennial.

290. ONOCLEA.

ONOCLEA SENSIBILIS. *L.* *Sensitive fern.*

Barren fronds pinnate; segments cut, the upper ones united; fertile fronds doubly pinnate, with recurved, globular subdivisions.

A great difference, in appearance, exists between the barren, and fertile fronds of this plant. The barren frond is composed of large, broad, oblong, sinuated leaves or divisions, the lower ones distinct, the upper ones connected by their base. The fertile frond is much narrower, its divisions short, its segments nearly globular, enclosing the fruit, and forming a sort of raceme.—Low grounds.—Perennial.

291. OSMUNDA.

OSMUNDA CINNAMOMEA. *L.* *Tall Osmunda.*

Barren fronds pinnate; divisions elongated, pinnatifid; segments nearly oval and entire; fertile fronds with opposite racemes. *Mich.*

This noble fern grows in large bunches in damp woods and low grounds, sometimes attaining to the length of a man. The greatest part of the plant is composed by the barren fronds, which are pinnate, their divisions cut into oblong, tapering, rounded, and somewhat acute segments. The fruit grows on a small, separate frond, resembling a cluster of minute, brownish seeds. Its stipe is invested with loose, reddish wool, its divisions opposite, and completely covered with small, two-valved, globular capsules.—Perennial.

OSMUNDA INTERRUPTA. *Mich.* *Interrupted fern.*

Fronds pinnate; divisions opposite, pinnatifid; segments nearly oval and entire; some of the intermediate divisions fruitful. *Mich. abr.*

A pretty large, smooth fern, in habit resembling the last. The divisions of the frond are principally opposite, or nearly so, and subdivided into segments, much like the last species. Only a few pairs of the divisions, occupying a central part of the frond, become fruitful. These are much shorter than the rest when full grown, they resemble compound, pyramidal racemes, and are covered on all sides with minute, brownish capsules.—Low grounds.—Perennial.

OSMUNDA REGALIS. *L.* *Osmund royal. Flowering fern.*

Frond twice pinnate, terminating in a compound cluster of fructification.

A handsome, branching fern, found in meadows and moist grounds. Stipe smooth. Divisions pinnate. Leafets or segments perfectly distinct and remote, oblong, very slightly serrated, the lower half of base longest. Capsules small, globular, two-valved, like the preceding species, arranged in a large, compound raceme at the top of the stipe.—Perennial.

292. LYCOPODIUM.

LYCOPODIUM COMPLANATUM. *L.* *Flat club moss.*

Leaves two rowed, united, superficial ones solitary; spikes in pairs, pedunculated.

A common, trailing evergreen. The stems, which creep on the ground for a considerable distance, are furnished with distinct, somewhat remote scales or leaves. Branches spreading, subdivided by regular forks, flattened, two edged. Leaves very short and acute. Peduncles elongated, forked at top, and usually supporting four erect, cylindrical spikes. Bractes closely imbricated, heart-shaped, acuminate.—Woods and pastures.—Perennial.

LYCOPODIUM OBSCURUM. *L.* *Radiated club moss.*

Leaves scattered, six rowed; shoots erect;

branches radiately forked; spikes nearly sessile, cylindrical.

The shoots of this species are erect, ascending at base, covered with small, imbricated, lanceolate leaves. Branches alternate, dividing by successive forks, the branchlets diverging like rays from a centre. Leaves in six rows, those of the lateral rows longest. Spikes terminal, solitary, sessile, cylindrical. Like others of the genus, they give out, when ripe, a great quantity of minute seeds, resembling a fine, yellow powder, and very inflammable.—Woods.—Perennial.

294. EQUISETUM.

EQUISETUM HYEMALE. *L.* *Rough Horsetail. Scouring Rush.*

Stem naked, very rough, mostly branched at base; sheaths whitish, black at the base and summit.

Found in moist woods at Lynn, and elsewhere. Stems erect, without branches, except at base, hollow, naked, furrowed, the ridges rough with minute teeth, which are hardly visible without a glass. The joints of the stem are surrounded with short sheaths, coloured with black and white rings, and toothed at the top. The fruit grows in an ovate, terminal ament, composed of peltate, six sided scales, bearing the seeds inside.

The whole surface of the stem is rough, like a file, and is used in scouring and polishing metallic vessels. Its cuticle, according to Mr. Davy, contains a considerable portion of siliceous earth.—Perennial.

EQUISETUM ARVENSE. *L.* *Field Horsetail.*

Fertile scape naked; barren frond with whorled branches, decumbent. *L.*

The fruitful stems of this plant appear in April, and soon decay. They are erect, smooth, furrowed, and without branches, their joints surrounded with large, swelling sheaths, which end in long, blackish teeth. Spike terminal, oblong-ovate, with a membranous border below it. The barren stems are taller and more durable; they are erect, or ascending at base, roughish, their joints furnished with sheaths and large whorls of simple, ascending branches. These branches are three or four cornered, with sheaths at their joints, ending in the same number of teeth.—Moist ground, South Boston.—Perennial.

EQUISETUM SYLVATICUM. *L.* *Wood Horsetail.*

Branches compound, curving downward, rough.

The fertile stems are erect, round, furrowed, jointed. Joints invested with large, loose sheaths, which divide into a number of broad teeth at top. Branches very slender, in a whorl proceeding from the upper joint, immediately below the sheath, divaricated and curving downward. The second joint from the top is furnished with a whorl of shorter branches, and sometimes also the third. Ament ovate, terminal, composed like the rest, of peltate, hexagonal scales. The barren stems are smaller and higher, their joints all furnished with whorls of branches, which are much longer, and considerably subdivided. —Low grounds, Roxbury, Cambridge.—Perennial.

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ERRATA.

Page 9, line 18, for "wooly," read woolly.
— 12, — 17, for "bisulcis," read bis sulcatis.
— 52, — 22, for "decumbent," read decurrent.
— 179, — 3 from bottom, for "graphalium," read gnaphalium.

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